01-1

Data Quality and Accessibility in Historical Demographic Studies: Siam and the Philippines

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Historical demography is recognized to be an important contributor to social history. Starting in the 1950s, European social history has been revolutionized by quantitative demographic research. Soon historical records were being examined all over Europe. This initial European focus to the field of historical demography has given way more recently to studies of other regions including Asia. Much of South and East Asia have benefitted from excellent research based on strong foundations of archival materials. But, across Southeast Asia the record is more mixed. For a long time the demographic record of this region was neither well documented nor well preserved and often materials have been difficult to interpret on matters such as the reported categories of population and geographic coverage. However, it is important to recognize that there do exist important archival materials on Southeast Asia that can support the study of demography historically. This paper attempts to describe some of the historical demographic data for Southeast Asia as an initial step toward making the best possible use of them in research. Carefully examined, the existing records can support the use of many available methodologies including indirect estimation techniques and approaches to modeling demographic systems.

Among Southeast Asia countries, the quality and volume of historical materials vary widely. In this paper we seek to shed light on the overall picture for the region by focusing on two important settings, the Kingdom of Siam and the Spanish colony of the Philippines. We will show that these two settings for a long time had similar underlying demographies and also common features of their demographic data such as recording designed to support the control and use of labor (a system of tributos and polo in one instance, and a system of corvee in the other). But the two data systems in their details reflect the very different political histories. The Philippines had a political and administrative system introduced by the Spanish and modified by the Americans. Siam has been a kingdom under a monarch, though it did witness important indirect effects of colonization toward the end of the 19th century. These different political histories are reflected in their rather different systems of demographic accounts. And the nature of those accounts has in turn affected the way that historical data have been utilized for historical demographic analysis in each setting. Our examination of these two demographic accounts highlights the strengths and weaknesses of these systems and the ways in which the field of historical demography has been shaped accordingly. Our detailed discussion of record keeping in Siam and the Philippines is complemented by considering, illustratively, the existing literature of historical demography emphasizing main findings, how the data have been used, and evaluations of data quality.

01-2

Strengthening the National Family Planning MIS Through Data Quality Monitoring: Lessons Learned from Bangladesh

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The Directorate General of Family Planning (DGFP) of MOH&FW in Bangladesh introduced a population-based family planning Management Information System (MIS) in June 2006. Since then, the EngenderHealth Bangladesh Country office has been providing technical assistance to the MIS Unit of DGFP to help strengthen the system. EngenderHealth has been monitoring service statistics of service delivery sites, in particular the service delivery statistics for IUD, Implant, Tubectomy and Vasectomy to check accuracy, completeness and consistency throughout the system.

The overall objective of this data quality monitoring was to identify gaps and limitations in data collection and compilation, record keeping, and reporting to provide feedback to the DGFP to further strengthen the MIS.

EngenderHealth staff in collaboration with the MIS Unit staff members of DGFP have been conducting regular data quality assessments (DQA) to check the validity and authenticity of gathered data; in particular service statistics from supported sites. During these field trips, the reported statistics were verified, for example through client visits. Corrective measures were recommended to strengthen the system. EngenderHealth also helped develop an operational manual of data recording and reporting for the DGFP field workers.

Based on the recommendations of the DQA, the DGFP agreed to incorporate a facility-based reporting system for LA/PM in the national MIS. After introducing this facility based reporting system, it became clear that long-acting and permanent-methods (LA/PMs) of family planning performance has always been under reported in the population-based report which was based on the fieldworkers report rather than the facility-report. EngenderHealth organized a number of meetings/ workshops to disseminate this significant finding along with other observations and limitations of the national MIS. Based on recommendations of the workshops, a high level review committee was formed to review the national family planning MIS and they suggested a number of changes in the MIS forms as well as in the data flow system. These were adapted by the DGFP in a step-wise manner. As a result of this experience, the DQA has been accepted by DGFP as a methodology for ensuring data quality and a management tool for decision making.

Even if MIS data collection and reporting is conducted accurately, there is a possibility for inconsistencies between LA/PM uptake reporting and actual performance. Experience in Bangladesh showed that incorporation of data quality monitoring as management tool and a regular monitoring and feedback system can be effective mechanisms to strengthen the national MIS system.

01-3

Necessity of Data Quality Assessment before Drawing Policy Implication on Large Scale Survey

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Data quality is an important issue with all data, be they observational records, survey data or specific check lists. There is a universal requirement by many governments around the world for data to be high quality and be better documented. Quality of data is the totality of features and characteristics of data that bears on their ability to satisfy a given purpose; the sum of the degree of excellence for factors related to data. Maintaining good quality of data is always a challenge in any survey.It is also defined as the state of completeness, validity, consistency, timeliness, uniqueness and accuracy that makes data appropriate for a specific use.

So the broad objective of the present study is to assess the quality of data in terms of misreporting and to understand the internal consistency using National Family Health Survey (NFHS-II, 1998-99 and NFHS-III, 2005-06), District Level Household and Facility Survey (DLHS-II, 2002-03 and DLHS-III, 2007-08). For this study, we have selected six states like Utter Pradesh, Bihar, Gujarat, West Bengal, Kerala and Tamil Nadu. Age accuracy will be measured by different methods such as Whipple's Index, Myer's Index, U. N. Joint Score, Pullum Method.To check the quality of data the selected indicators are age reporting, women's education, maternal health information (IFA tabulates: Days verses No. of tablets, Contraception use, visit of ANC and other routine checkup), child health. Results indicate that Myer's Index is more than 9.6 and 10.5 for NFHS-II and III,12.1 and 10.8 for DLHS-II and III, whereas Whipple Index is more than 1.9 and 2.1 for NFHS-II and NFHS-III and 2.4 and 2.1 for DLHS-II and DLHS-III, and also U. N. Joint Score is more than 28.4 and 30.5 for NFHS-II and III and 23.8 and 29.1 for DLHS- II and III, which indicates an overall poor age reporting in the survey. Highest accuracy level in age reporting for women is obtained in Kerala (61.4%) in NFHS-III and for DLHS-III; it is only 2.7% in Bihar.If women's ages are misstated, even an accurate enumeration of the total births by each woman will result in distortion in age- specific fertility rates. If age misreporting is systematically related in any way to marital status and parity, there may be systematic biases in fertility estimates.

Reporting is good in case of children's age which is highest in 96.2% in Bihar. Inconsistency is also obtained for reporting of number of ANC visits and examination done in ANC checkup. Highest misreporting is observed in Uttar Pradesh and minimum in Kerala. Misreporting is also observed in reporting about child immunization. Quality differs considerably by states. In terms of respondent's characteristics, literacy comes out to be the highly influencing factor in reporting accurately.

01-4

Consistency and Quality Check of Survey Data in India

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The reliability of responses in surveys to questions on topics such as utilization of health facilities by mother and child has long been a subject of concern. This paper explores one type of response reliability; the consistency of responses to questions from same individuals over time on utilization of available health services involving child delivery and care taking of child.

Data were generated by an independent monitoring agency. A sub - sample survey was carried out in 13 states as a part of a larger Coverage Evaluation Survey, conducted in all states of India in 2009 by UNICEF, to improve the quality of data. The sub-sample survey consists of a randomly chosen sample of 510 schedules of mothers and 497 schedules of children. The responses given by the individuals of sampled schedules were rechecked by independent monitoring agencies. Differences in responses were noted and conveyed to the field agencies to rectify the recurring errors. Statistical analysis was conducted to find consistency of responses.

The question on “place of last delivery” has shown that 96% of the responses were correctly matched considering all the states. For the question on “the type of delivery”, rechecking the response data found very little difference between the original and rechecked survey data. In regard to the question “who conducted the delivery” there was a 93% overall match, with a range of 85% in Arunachal Pradesh and 100 percent in Jharkhand and Orissa. The matched response for the “supplementary nutrition by the Angawadi Centre” is 98% with 100 percent matching response from Arunachal Pradesh, Bihar, Orissa, and West Bengal whereas the lowest 89% each was in Jharkhand and Maharashtra. On the “prevalence of diarrhoea in last two weeks” the lowest matching was observed in Bihar, Gujarat and Rajasthan. On aggregate nearly 97% of the responses across the states were matching. The “prevalence of cough in last two weeks” in which the matching responses was only 93% and cent percent matching in three states of Andhra Pradesh, Arunachal Pradesh and Jharkhand. The question on the conducting the routine immunisation in their local areas was matched up to 90%.

The findings suggest that the interview situation is an important factor in reporting agreement. Response inconsistencies, and manner in which they are resolved, are shown to have important implications for overall estimate of important indicators for the utilization of health facilities in the country. The monitoring exercise has, therefore, addressed the fundamental issue which needs further consideration in the large scale surveys. Otherwise it poses the validity threat to the data quality and its results on which the national policy is framed.

01-5

Revisiting the Philippine Population Census: 1948-2010

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Since the turn of the 20th century, a number of censuses of population and housing have been taken in the Philippines. When vital registration proves deficient, the censuses provide the essential socio-demographic data needed for the planning and formulation of public policies both at the national and sub-national level. Over time, census taking in the country has provided useful inputs for the production of direct and indirect population estimates and projections; the quantification of migration flows; and the assessment of the impact of migration on population growth. The data made available by census taking also allowed for the estimation of rural-urban migration and the spatial distribution of the population. Because of the high level of disaggregation of census information, it also provides socio-demographic information of population subgroups such as indigenous peoples, among others.
The increasing demand for evidence-based policies and programs underscores the need to ensure the provision of timely and accurate census data in the country. It is within this context that this paper assesses the Philippine census on two aspects: the content and the level of accuracy. Particularly, it will assess the content and the extent to which the contents have changed over time. It will also assess the quality of the census data by examining the trend in population growth and structure over time as a basis for evaluating accuracy of reporting.

Results of the study hope to provide inputs in further improving census-taking in the country to further improve its utilization in policy development and formulation.

02-1

Mortality Data in Three Chinese Societies: Comparability, Institutional Causes, and Adjustment

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A comparative study of causes of death is widely used to identify the key issues of public health and generate possible etiological hypotheses. Despite the stipulated rules by the International Classification of Diseases (ICD) to select the underlying cause-of-death (UCD), the comparability of cause-of-death statistics, from society to society, is largely affected by the knowledge of the certifying person in diagnosing the causes of death and the coding practices on the basis of the information on the death certificate. The official data indicate that mortality rates by the causes of pneumonia, and renal failure are much higher in Hong Kong than those in Taipei and Shanghai. By contrast, Hong Kong's mortality due to diabetes is lower. The paper will, first, analyze that, to what extent, such differences in cause-specific death rates are attributable to practical variations in diagnosing and coding the cause of death in three Chinese societies. Additionally, the difference in filling certificates of UCD has also been found by different places of death. It then investigates specific institutional and cultural contexts that lead to a variety of diagnostic and coding practices. On these bases, the paper proposes to use multiple causes of death as a workable way to improve the comparability of cause-of-death statistics across societies.

02-2

Proxy Reporting and Biasness in Reporting of Morbidity in India: Data from National Sample Survey on Morbidity

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National Sample Survey (NSS) provides national and sub-national level information on morbidities and health care at regular intervals since its inception on 1953-54. In these surveys, information for all members of sample household was gathered either from head or a key informant of the household. In this way, information for 68 percent sample population was collected from proxy respondents. This paper aims to explore the effect of proxy-reporting on population estimates of morbidity prevalence and to identify patterns of biases in these estimates due to proxy responses based on recent 60th round NSS data on morbidity and health care. Proxies underreported morbidities with an overall morbidity prevalence of 73 per 1000 population compared with self-reported morbidity prevalence of 130. Proxy-responses in NSS on morbidity and health care introduce systematic biases, affecting national and regional estimates of morbidity prevalence. Suitable adjustment for proxy-responses should be made while estimating realistic population risks from NSS data.

02-3

Evaluation of Data on Household Deaths Collected Through Population and Housing Censuses

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Because of the lack of complete death registration in many countries, there is an increasing interest to collect deaths statistics using the household deaths approach in population and housing censuses. In the 2010 round of censuses (censuses conducted in the period of 2005-2014), substantial number of countries have included questions on household deaths and collected data on age and sex of each deceased persons in the households. In addition to household deaths, some countries have asked a few more questions to identify deaths of women of reproductive age who were pregnant or within 6 weeks of delivery at the time of the death to assess maternal mortality level.

It is however widely acknowledged, by the UN Principles and Recommendations themselves and by researchers, that census data on household deaths in a defined reference period require careful evaluation and often substantial adjustment. Question of household deaths suffer from a number of potential errors because of the nature of the question such as deaths of persons living alone at the time are not expected to be reported, respondents' lapse of memory or neglect, or respondent's confusion about the reference period. Therefore it is very common to underestimate the overall number of deaths using the household death question. Sometimes over-enumeration of the deaths may occur because of multiple declaration of a deceased person from different households.

The purpose of this paper is to study the impact of different (1) ways of asking the questions and (2) reference periods used by countries on household deaths collected in population censuses; and to evaluate data quality of the overall deaths as well as maternal deaths based on some country experiences. Various techniques will be used to evaluate data quality of household deaths such as census survival ratio, general growth balance, and synthetic extinct generation.

03-1

Unified Database of Disability People to Support Social Security

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This research paper aims to explore the integration of database management on the implementation of target program for disable people. The accurate, integrated up-dated and well management of disable-people database will give a significant of target recipients' programs. The main purpose of this paper is to evaluate and monitor the availability of integrated database disable people at national, regional and local level. The provision of unified database on disable people will be really useful for planning, implementing, monitoring and evaluating the disable programs' development and simultaneously to measure the progresses and challenges on aids program including social protection programs. The research method will apply a historical observation based on primary to the Indonesian Population Census 2010 and secondary macro-micro data set. In further, the literature study and other sources which are related to this topic research will be used for research exploration. Finally, the research result is expected to support policy maker and decision maker for refining the achievement of disability development program.

Keywords: unified database, disability People, Social Security and development

03-2

Reliability and Quality of Population Census Data among Asian

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This proposal research will analyze the quality, reliability and comparability of Indonesian's inter-population census data which are followed by the international comparability variables to other Asian countries for international comparison's needs. Firstly, the assessment will start from the variety and similarity of variables in the Indonesian population censuses whether all variables content among censuses have been conducted in Indonesia since 1940s up to recent one 2010 are comparable among others. Next, the availability of the certain variables inter censuses will assess the accuracy and identify the error resulted from coverage and content (response error) by checking the internal consistency of the data based on an aggregative basis for the tabulated data (age distribution, sex ratio, survival ratio) and applying life table included statistical testing for analysis.

Based on the variables observation of recent population census in Indonesia have collected an individual characteristics and households' characteristics will compare and link to other countries. The individual characteristics are namely: relationship to head of household, migration, fertility, mortality, employment, disability/ difficulty, education, language, ethnic/ culture. Whilst, household's characteristics is represented by housing unit characteristics mainly to health indicators and access to some services, among others: ownership status of dwelling, type of floor material and size, source of lighting and drinking water, energy for cooking, toilet facility, technology access (internet and telephone).

The result of assessment will support to the availability and lessen learn for other developing countries on assessing the quality and reliability of population census. Finally, the comparison perspective on using population census data can be developed not only by regions but also in the Asian region and even in the world level.

03-3

An Adjustment Procedure of Vulnerable Group of Population Where Major Errors are Found Especially in Developing Countries: A Case Study for Indian Census Age Data

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Adjustment to census age distribution is still very important for backward countries. Moreover, while adjustments are done, the very young children of age group 0-4 years needs special attention because of various forms of error including under enumeration, to a great extent, particularly in developing countries where many kinds of dogmas, superstitions are still prevailing people. While adjustments for the entire distribution is done, special care is taken for this group. UN's method is well known. In the present paper stable population theory has been adopted to estimate this group from groups 5 to 14 and 60+ population indicating recent fertility and mortality. As a case study, Indian census 1991 data are used as when the paper was prepared no 2001 census data were available albeit emphasis is on methods. The estimates give some consistent values judging through comparing the figures with the same for 1971 and 1981 censuses and comparing birth rates calculated from this population with the SRS estimates of R.G. Office, India. The table 1 gives below a close picture of observed and the estimated values.

03-4

Digit Preference and Avoidance in Age Reporting: An Analysis of 1991 and 2001 Population Census, Nepal

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A Population Census is a complex, large-scale operation usually undertaken only once in every five or ten years. Due to its complex operations a 'perfect' Census is hardly attainable. Errors inevitably occur in collection of Census data. It is essential therefore to detect and quantify the errors by evaluation so that the users may be aware of the quality of Census data. Among the large volume of data gathered in a Census, age and sex data play a vital role in population studies. The age-sex structure is one of the most fundamental characteristics of population composition. Past variations in the basic components of population change i.e. fertility, mortality and migration are reflected in the age-sex structure. Conversely, the age-sex composition of a population affects its fertility behaviour, mortality and morbidity levels, migratory movements, labour force participation and a host of other factors. Further, the age-sex data are the basic inputs for making population projections both at national and sub-national levels. Age-sex data are therefore almost always essential for analysis of population dynamics. But the Census age-sex data are affected by errors. The two major types of errors are coverage errors and content errors. Coverage errors result from omission or duplication of individuals; hence it affects all the information collected including the age-sex data. Content errors, on the other hand, occur due to inadequate information supplied or mistakes made in reporting or recording information. A common form of content error is the misreporting of data. Misreporting of sex is generally rare. But age misreporting seriously affects the quality of age data. Hence evaluation of age-sex data is one of the most important steps in a Census evaluation programme.

The data used in this study were collected by CBS in 1991 and 2001. Analysis is based for the entire data obtained in 1991. However, fully enumerated area data are used for 2001 census because some parts of the country were excluded from full enumeration due to insurgency.

This paper examines the quality of age data reporting in the two Population Censuses, 1991 and 2001 conducted in Nepal. Various combinations of methods were used to analyse single ages of population at various levels of aggregation: total, stratum, gender and ethnic groups. The pyramid chart, Whipple-type Index and test differences of terminal digits of single age seem to suggest that misstatements in age reporting do exist due to digit preferred and digit avoided in both censuses. In addition, this study aims to provide the base for the evaluation for currently accomplished Population Census 2011 in Nepal.

03-5

Cross-Census Assessment of Age and Sex Ratios: An Application of Newly Updated UN Assessment Guidelines to Microdata Census Samples from the IPUMS International

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Data about social phenomena are essential to researching patterns of social life, and census data are among the most meticulously collected data about social life. However, even these data cannot perfectly represent the social characteristics of the populations they are meant to describe. It is, therefore, essential that researchers using such data be as familiar with their source data as possible. The more researchers understand patterns of error, omission and bias that necessarily stem from the complicated process of data collection, manipulation, dissemination and estimation, the more accurately thay ca describe the populations they analyze. The IPUMS International data collection includes 185 census microdata samples from 62 countries of the world. In addition to providing the data itself to researchers at no cost, the IPUMS provides a wealth of documentation about the enumeration procedures used to collect the data. Recently, IPUMS International has undertaken efforts to provide users with additional information about the microdata sample designs and data structure. This paper reports on data assessment results comparing age and sex ratios across national census samples within Asian countries of the IPUMS International collection: Cambodia, China, Indonesia, Maylasia, the Philippines, Thailand, and Vietnam. We base our assessment procedures on the newly updated United Nations recommendations detailed in the "Tools for demographic estimation," or Manual XI, a preliminary version of which is available at demographicestimation.iussp.

04-1

Surveillance Data Collection in Matlab : Comparison of PDA and Paper

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The personal Digital Assistant (PDA) has proven time-saving ability and quality assurance of data against normal human error in paper-based data collection and compilation.
Discuss the use of PDA for recording demographic events and quick report generation and explore its potential compared to the paper-based system.

The Basic4ppc 6.8 software was used in the data-collection tool loaded onto iPaq Pocket PC hp212 series of processor intel@ MARVEL@ PXA310 with 121.43 MB RAM and Windows Mobile-2006 Classic. Four outreach workers and 4 Field Research Assistants (FRAs) with secondary-level education and without any prior computer experience received a one-week training on PDA handling, 2 months each for field piloting, one month for recording first in paper, then PDA, and feedback training for program update and updating their misconceptions. The fron-end was designed with range checks and skip patters during data entry and correction of errors. Back-up support at the end of every interview onto storage cards in the PDA and collected data were downloaded to PCs every 2 weeks, and feedback reports were used for evaluating accuracy.

The PDAs were well-accepted by both outreach workers and supervisors. No major PDA-related problems or loss data were encountered. Overall, the completeness of data deom HDSS (1,200) events from June to Dec 2010 was over 99%. A team from the head office observed the time and errors at the time recording events in the PDA and paper. Sixty-five percent less time was required for recording of each event. Errors occured in paper rather than PDA.

Evidence of time-consuming and error-prone process of data-entry and compilation, and of improvement in data quality demonstrates the potential for the use of PDA in a large scale. The front-line supervisors of the Health and Demographic Surveillance System can easily monitor the worker's field activities and data quality. validated data can be used for analysis to improve the quality of data and performance of outreach workers. Quality demographic data readily available within the shortest period of time and can support other studies providing most recent data.

The authors thank ICDDR,B and its core donors for supporting the health and demographic surveillance in Matlab

Key words: Data collection; PDA; Bangladesh

04-2

An Assessment of the Quality of Large Scale Survey Data in India

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This paper makes an attempt to examine four different categories of possible errors in large scale surveys: incompleteness, age misreporting or digit preference, transfers across age boundaries and inconsistency of information. We also examine impact of fieldwork related factors, erroneous reporting of age at marriage, birth year of children and deliberate skipping on the quality of data. This main focus is to examine cautiously different components of non sampling error and consequently its impact on data quality. For measuring age misreporting standard summary measures of digit preference are calculated. In order to quantify the extent of distortion in the age/sex structure of the sample near the age eligibility boundaries, indices are calculated based on age and sex ratios. Age displacements of women are identified by estimating downward and upward transfers across the eligible age range for women.

The values of indices suggest higher degree of digit preference in age reporting by respondents. Although extent of digit preference differ by state but highest values are obtained for the states with low level of literacy. In terms of respondent characteristic the main factors associated with the largest differences in age data are low levels of education, place of residence and low socio economic status of respondent. The analysis carried out in order to examine pattern of age reporting in the bordering age groups of the eligibility age range show that in all but one state female were systematically excluded from the eligible age group. This may happen either due to respondent misreporting of ages or intentionally misrecorded by interviewer to reduce number of interviews to be conducted. The result of shifting women from eligible age group results in inflated sex ratios in the age group just outside the eligible age boundary.

Analysis on consistency and completeness of data suggest that, while recording some useful information or questions preceded by a set of relevant questions, response was missing either completely or partially or it was recorded as Don't Know. This may result either from interviewer bias or respondent bias and it becomes difficult to identify once data have been entered. In addition, problems were detected in reporting percentage of women currently pregnant and children's birth year. These errors may affect estimates of current fertility and trends in fertility over time. Inconsistencies were also found in reporting knowledge of RTI/STI, HIV etc. in the survey. In terms of field work related factors, the results of the analysis points towards the fact that increased number of visits to a household and selecting proper/convenient time for conducting an interview result in a better response rate and good quality data.

04-3

A Study on Digit Preference in India

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During the past few decades several attempts have been made to modify the Whipple's Index (WI) of digit preference earlier suggested by the American demographer George Chandler Whipple (1866-1924). Whipple's original index tells the extent to which age data shows systematic heaping on ages ending in 0 and 5. Whipple's modified indices on the other hand allows one to understand digit preference taking place at each of the terminal age from 0 to 9 . In the present study an attempt is made at first to review in detail various modifications suggested to it. Secondly, an attempt is made to apply the newly developed indices to age data of various states in India of the census of 1971, 1981, 1991 and 2001. 593 district's of India according to 2001 census is analysed by using GIS software and the results are shown on the appendix table by means of India map. It is concluded that the modified WIs gives more or less same results as that of the Myer's index (MI) and have certain advantages over the MI.

04-4

Presentation of a Successful Pattern in Quantitative and Qualitative Preferment of Registered Data of Population in Iran

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The ongoing increase in human population and rapid development of urbanization and accession of natural resources limitation and also gradual wastes of the resources, on the contrary production of environmental pollution and also various aspects of economical, social, cultural and etc. requirements of human society lead to pay more attention on planning and taking some measures on whole aspects of society to establish an ideal and developed society in regard to equitable distribution of resources. Meanwhile the planning, taking right and accurate measures by using continuum and authentic statistics and information would be possible. Along these policies, compiling and accomplishing of reliable method of collecting authentic statistics and information have formed and collecting of population statistics have become more important, because for many years, whole parts of the society and structure of the human population have undergone these information changes so it is obvious that there is a reciprocal link between the information and statistics of population and the structure of population in a society.

These important issues cause to pay particular attention on registering both birth and death, which are the most essential factors of growth and decrease of population. So, national organization of civil registration and UNFPA have carried out a project, called 'covering the registration of vital event' by using PGE tactics in 1995. At the beginning, it accomplished in 4 provinces and then in 14 provinces (till 2001). From then on, a headquarter established in national organization civil registration covering the registration of vital events. On the basis of legislated riders and laws via that headquarter, all of the provinces obliged to obey the project. The most important aim of this project was separation and assessment of the quality of collecting vital events statistics. This tactic was carried out in developed countries, such as USA, Canada and Soviet Union in 1930 and the first studies were accomplished in part of the Asia (India) in 1947.

The aims of this article are as follows:
1. Introducing the circumstances of accomplishing the project in whole aspect by emphasizing on its strengths and weaknesses.
2. The degree of success of the project in registering on time in collected provinces.
3. Presenting the process of improved registration of birth and death events from doing the registration till now.
4. Presenting a successful pattern of this project.

In consequence, this project leads to increase in percentage of birth events registration from 75.1% in 1995 to 95.3% in 2010 and also growth in death events registration from 37% to 85% in 2010.

04-5

Open Access Web-Based Data and Analysis Software: Data Resources that Facilitate the Study of the Aging in a Complex Society

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The availability and application of secondary data for research, classroom instruction and policy development has grown tremendously over the past decade. With the rise of the Internet and other electronic means of distribution the costs of sharing data and information have declined dramatically; changing secondary data from a commodity to a public good to be shared in a manner enhances our ability to engage in cross-national research. While the costs of sharing data have declined across time, the costs associated with collaboration and cross organization research and training remain high. Inefficiencies in collaborative research and training programs include the costs of travel, replication of effort, incompatible analysis platforms and the inability to replicate findings between collaborative partners.

The NACDA Data Archive preserves and distributes over 1,600 unique studies that address issues of aging and health. With the support of NIA, the NACDA Archive performs three central functions: 1) Acquires and preserves data sets of scientific importance to the gerontological research community, 2) Distributes data and documents in a manner that makes their use easy and cost effective for research, 3) Contributes to the intellectual vitality of the gerontological sciences. This presentation will discuss how NACDA seeks to increase its capacity to effectively share research tools to facilitate international research collaborations.

Researchers at the NACDA, based in the University of Michigan in the United States have developed a set of web-based analysis and educational tools that allow for more efficient use of secondary data across research communities regardless of physical distance. These tools allow researchers to access, subset and analyze data regardless of their physical location, the only requirement is an internet connection. The systems are freely available to all members of the research community worldwide and exist to encourage teaching and the collaboration of researchers across disciplinary and national boundaries. The paper will present applications of these tools for collaborative research, on-line education, long distance teaching and classroom laboratory situations.

04-6

Consistency of Reproductive Attitudes in Rural India: Evidence from a Longitudinal Study

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The information related to the reproductive preferences has become very important for understanding fertility behavior. However, the quality of such type of data is another important issue. The present study is based on a large-scale longitudinal study undertaken in rural India with the objective of understanding how the quality of family planning services is linked with contraceptive behaviour. The 2002-2003 longitudinal survey (wave-2) in rural India was designed to conduct a re-interview of ever married women who were interviewed during the second round of National Family Health Survey (NFHS-2) conducted in 1998-99 (wave-1) (IIPS and ORC Macro 2000). NFHS-2 covered all the states of India whereas longitudinal survey was conducted in the states of (only rural areas) Bihar, Jharkhand, Maharashtra and Tamil Nadu. The main objective of the present study is to evaluate the consistency of reporting ideal number of children, consistency and validity of reporting desired number of children for subsequent fertility and validity of reporting unintended last birth. Result clearly shows that around 39 percent women have given the same response in both the surveys. Moreover, around 20 percent women reported at least one child fewer in the second wave whereas around 14 percent women reported at least one child greater in the second wave. However, around 27 percent women have given non-numeric response/no response either in the wave-1 or wave-2. Further, the reporting of ideal number of girls was found to be more consistent than ideal reporting of boys. Result also shows the consistency of reporting ideal number of children by different states of India. The pattern was almost similar to the India level but it clearly shows that education level of women is related to the consistent reporting of ideal number of children. The consistency of reporting ideal number of children was found to be highest in case of Tamil Nadu followed by Maharashtra, Jharkhand and Bihar. Moreover, these four states are in the different stages of socio-economic development and demographic transition. Tamil Nadu and Maharashtra has already attained the replacement level fertility whereas Bihar and Jharkhand are in the early stage of demographic transition. It is also analyzed the frequency distributions of desire for more children in the wave-1 and wave-2. The bulk of the respondents were undecided in both the surveys. Further, this percentage was found to be highest in Maharashtra followed by Tamil Nadu, Jharkhand and Maharashtra. The second most common response was that they wanted more children (15.9 percent) in both the surveys followed by wanted no more children (12.1 percent). The consistency of the planning status of the last birth (wanted/unwanted) will also be examined in this paper.

05-1

Graphical Analysis of Reliable Quantitative Democracy Composite Indicators

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Indonesia has finished first time ever annual democracy quantitative measure. Quantitative means a scale of measurement higher than ordinal. Raw data on the field comes from paper-based local news paper. The quantification process has twenty eight indicators grouped into three composite indicators: <1> civil liberties , <2> political rights , <3> others.

Based upon raw data on the field, out of twenty eight indicators, we analyze eleven most reliable indicators. It is recommended that these eleven most reliable indicators be kept in mind for more emphasize.

<01> threats or use of violence by local government officer which curb freedom of speech
<03> threats or use of violence by local government officer which curb freedom of association
<06> action taken or statement by local government officer which restrict freedom of people to practice religion or which require people to practice religion
<09> action taken or statement by local government officer which is discriminatory on gender or ethnicity or vulnerable groups
<11> incidents in which people's right to vote or be elected is curbed
<16> frequency of demonstration or boycott action leading to riot or violence
<17> frequency of report or news on management of local governance
<18> report or news on regional election commission (kpud) partiality
<19> report or news on fraudulent counting of vote
<25> report or news on use of government facility for political party activity
<26> report or news on civil servant involvement on political party activity

the numbering follows page 88 of 2009 IDI from www.UNDP.or.id/factsheets/gov/IDI.pdf.
In general nationwide political rights composite indicators turns out to be more homogeneous. Civil liberties shows more heterogeneous result among 33 provinces. One province has a different set of rules regarding political rights and civil liberties which graphically may lead to spurious heterogeneity. In mid 2012 result of the second annual democracy quantitative measure will be disseminated. It is expected that result be compensated regarding this different set of rules.

Preparation for a graphical analysis includes choice of class interval and number of classes during raw data grouping. In the ordinal scale of presentation, each class is supposed to be represented by a distinct gradation of a particular colour. Excessive number of classes reduces the distinctive characteristic of any class. For average screen resolution and discrete number of colours, it is recommended to have not more than four classes or gradation of a particular colour.

05-2

International Migration in the CIS Region in the Mirror of Statistics

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The area of the Commonwealth of independent states is one of biggest migration systems in the world. The scale of migration movement on the post-soviet space (over 7-8 million of temporary labour migrants and about 300-400 thousand "permanent type" migrants) dramatically increased the role played by the CIS countries in global migration process. In 2000-2010 about 92% of all immigrants which arrived to the CIS states came from another country of the Commonwealth. The current situation is characterized by preferential orientation of migration flows onto Russia. Proportion of Russia among permanent migrants ranges from 50% in Moldova and Ukraine to 99% in Tajikistan. Russia accumulates over 80% of migrant-workers from Central Asia and Transcaucasia and about 50- 60% from the countries of the European part of the CIS. Due to the deficit of reliable data the total size of migration flows in the CIS region could be only estimated. The biggest part of temporary labour migration is undocumented thus being a real challenge for receiving and sending societies.

In spite of the crucial role that migration plays in the region an effective migration management and investigation appeared to be hampered by lack of statistical data. By the end of the first decade of 2000-ies several authoritative international organizations - UNECE, IOM, OSCE and the World bank , initiated projects focused on description of available data on migration and harmonization of statistics in the CIS - mainly in the area of central Asia and the Russian Federation. The research implied collection of available statistics on migration in the selected countries, analysis of the situation about technology and methodology of data collection, processing and dissemination, and - on the final stage - preparation of a set of recommendations addressed to the national experts and practitioners and targeted at improvement of the situation. Data collected from sending and receiving countries made it possible to compare ‘mirror" statistics on the same flows measured in the country of origin and destination. This exercise helped to see the scale of underestimation of flows and on this basis estimate the scale of irregular labour migration in the region. There are still too many limitations in access to administrative data , mainly caused by traditional and non-motivated secrecy of information. Migrant-receiving countries of the region (Russia and Kazakhstan), that were supposed to have more resources for development of statistics, do not conduct sample surveys and utilization of administrative data is also rather poor. Migrant-sending countries - Kyrgyzstan and Tajikistan - managed to establish and maintain the system of representative household surveys, which partly compensate a certain deficit in administrative data on migration.

05-3

Shortcoming in Some Index: Improvisation through Mathematical Modeling

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Historically indices have perpetually been constructed to measure the digit preference error in the distribution of single year age by researchers, actuaries. Simultaneously process of modification has been going on in parallel from time to time by them. All these have taken place because of methodological drawbacks or many constraints came on the way of constructing the same. As a result the process was continued in a fashion from long past, in the recent past and at present time too. Every researcher while doing any socio demographic project or even in the censuses of many countries, especially in the developing world at an initial stage use to focus on the data quality. As per the present context of the paper, obviously age reporting error is significant to manifest either in the census or project report based on the data either from census or sample. Usually Myers' index (1940), to a large extent, has been given in those records and reports. Sometimes Whipple's index (1920) has also been presented in some reports. An attempt has been made to control the many kind of constraints and predicaments which were proposed by actuary scientist, King (1915), Myers(1940), Bachi (1951), Ramachandran, (1965) and others. The current technique solely is an exercise to show how the many defects at a time are eradicated by utilization of some mathematical model. The methodology was applied on the single year age data of Indian census, 2001. The result arrived at has been compared with the actual calculation of the index and the appropriateness of the present technique has been discussed.

05-4

Consistency in Estimates of Sex Ratio at Birth from Registered Birth to Census in Greater Mumbai

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Sex ratio at birth is considered as a biological entity and in most of the population, the sex ratio at birth ranges in a narrow interval of (103 to 107) male births to 100 female births. However, in recent period many developing countries especially from Asia, sex ratio at birth has shown an increasing trend.

In India, the research work has clearly brought out high proportion of male births and an increasing trend in sex ratio at birth. However most of the research on sex ratio at birth is based on census reporting of sex ratio of child population. Apart from the census, the other existing sources have given the estimates of sex ratio at birth but these data sets have their own limitations. National Family Health Survey and District Level Household Survey give estimates of sex ratio at birth, but these estimates are subjected to the sampling error. Sample Registration System provides estimates of vital rates. However, the sex ratio at birth had never been included in the SRS annual publications till 2000. These estimates are available only for past few years. Though, the civil registration system in India is deficient there are few states and cities where registration of births is fairly reliable. Mumbai city is one of these cities having fairly reliable time series data on births. Thus keeping this point in view the present study aims at studying sex ratio at birth of Mumbai's population.

Broadly, this research work is intended to examine the present level and trend in sex ratio at birth of Mumbai along with consistency in the estimates of sex ratio at birth from data on registered births by Bombay Municipal Corporation and estimates from Census age distributions. From registration data sex ratio at birth has been directly estimated, while it has been reverse survived from census data.

Trend analysis of sex ratio at birth in Greater Mumbai for the past decade shows that overall sex ratio at birth in Greater Mumbai is stable at 109 male babies to per hundred female babies. From the time of independence of India till 1961 the sex ratio at birth in Mumbai was in normal range. During 1960s fluctuations in sex ratio at birth have been observed, but the fluctuations were always in the normal range of 103-107. Looking into overall trend, the overall sex ratio at birth shows an increasing trend.

The study highlights that registration of births in Greater Mumbai is almost complete and reliable, but the excessive increase in sex ratio at birth during 1971-76 and 1991-95 periods is still unexplained. Probably, it may be because of use of ultrasound and other new technologies developed for detection of sex of the fetus.

06-1

The Future of Fertility in Asia: Results from a Global Survey of Experts

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In Summer 2011, a global Internet survey on the likely future trends in fertility, mortality, and migration and the main factors behind them was conducted among the members of major population associations and selected other professional organisations. The survey, a collaboration between IIASA's World Population Program and Oxford University, will become a basis for new probabilistic population forecasts by age, sex, and level of education for most of the countries of the world and the provinces of India and China. By allowing a large number of experts to participate and by providing an argument-based underpinning of numerical estimates about future fertility trends, the survey addresses two common weaknesses of population projection-making: 1) a very limited or no theoretical foundation and 2) a participation of a small and often closed group of experts formulating the parameters of projection scenarios.

41 projections were made for lower-fertility settings in Asia, and 85 in higher-fertility settings. Our results demonstrate some of the key issues and forces which population experts believe will shape the future of fertility in low and high fertility settings. Furthermore, by collecting point estimates for TFR (with 80% PI) we are also able to compare expert opinions with the TFR assumptions of the UN.
Following the survey, two meetings of 'meta-experts' were held to discuss the findings and implications. At these meetings, the final TFR assumptions for many countries were discussed in conjunction with an analysis of the arguments and forces involved. Finally, a series of 'storylines' or 'scenarios' were created - internally consistent sets of future social, economic and cultural developments which would either lead to lower or higher/stalling fertility.
Here, then, we present first results of both the survey modules and meta-expert meetings on low and high fertility for countries in Asia. [SHALL WE ADD THIS?] The next step will be to develop fertility scenarios for all world countries, which will be presented at the meeting.

06-2

Fertility Intentions and Fertility Outcome in Japan: A Longitudinal Study

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Using data drawn from the 2000 national survey on family and economic conditions (NSFEC) in Japan and its follow-up in 2009, this study examines the relationship between 2000 fertility intentions and changes in fertility intentions as well as actual fertility behavior between 2000 and 2009 for Japanese wives and husbands of reproductive age.

The NSFEC is a national probability sample of Japanese men and women aged 20-49. Using a stratified, two-stage probability sampling based on the 1995 population census tracts distribution, the 2000 NSFEC obtained 4,482 usable responses. To examine changes over time for the same individuals, the 2000 NSFEC was followed up in 2009. Given that fertility intentions are only relevant in the prime childbearing years, and that Japan has a relatively late age pattern of childbearing, this study focuses on currently married women aged 20-34 in 2000 and currently married men aged 25-39 who stayed married in 2009.

The study first examines how fertility intentions of wives and husbands-how strongly they would like to have another child given a number of children they already have-in 2000 are structured by their demographic, socioeconomic, and household characteristics. We then examine, in multivariate context, how fertility intentions in 2000 are related to the likelihood of having a child or children during 2000 and 2009, simultaneously accounting for the individual-level effects of such basic demographic characteristics as birth cohort, education, and numbers of surviving sons and daughters, as well as for the prefecture-level economic conditions.

Like many post-industrial in the West and newly industrialized countries in Asia, Japan has experienced fertility decline to well below-replacement levels since the mid-1970s. While this second fertility transition in Japan has been caused mainly by decreasing rates of marriage among the young Japanese, marital fertility has also started to decline in recent years. After decades of rapid economic growth, Japan has been experiencing a prolonged economic downturn since the 1990s, and the expansions of market economies and ensuing economic globalization have altered the nature of the labor market. The growth of market economies has also been accompanied by changing attitudes toward family building.

In the context of the shift of childbearing from social imperative to a matter of individual/couples' choice and changes in the economic conditions in recent years, it is important to examine how fertility intentions of Japanese couples are structured by individual and community-economic conditions, and test how fertility-related attitudes, namely how strongly individual wives and husbands want to have another child, are related to subsequent fertility behavior.

06-3

The Post-Demographic Transition of Japan: Its Definition, Marks and Implications

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In the early twenty first century, the total population of Japan began to decline, after reaching its maximum of 128 million. Its total fertility rate has been below the replacement level since the middle of the 1970s and its female life expectancy at birth exceeded 80 years old around the middle of the 1980s. It is obvious that this country has shifted to a new population regime and we introduce a new concept that Japan has entered on "the post-demographic transitional phase." For the country which has already experienced modernization and industrialization, this is the third phase of its total history of population, following "the pre-demographic transitional phase" and "the demographic transitional phase." First, in this paper, we give a definition of "the post-demographic transitional phase," rethinking of classical theories of the demographic transition, which anticipated the fertility settling down at the replacement level and the total population returning to the stationary one after the transition completed. Second, we present demographic indicators which show when and how Japan entered this new era. From examining of the changes in population growth rates, fertility patterns and mortality patterns, we conclude that the shift from "the demographic transitional phase" to "the post-demographic transitional phase" in Japan occurred between the middle of the 1970s and the middle of 2000s. Third, we illustrate that this shift in the demographic regime is closely associated with socioeconomic and cultural, even political changes prominent in recent Japan, described as "lost two decades." We are now faced with many difficult problems such as a rise in unemployment and marriage squeeze among young people, an increase in poor single households particularly among elderly persons, and economic down turns and fears of financial crisis at national level. The study of the post-demographic transition of Japan from both theoretical and empirical aspects is important because Japan is leading other Asian countries in experiencing such drastic changes in a stream.

07-1

A Re-Examination of the Fertility Assumptions in the UN's 2010 World Population Prospects: Intentions and Fertility Recovery in East Asia?

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This paper is about the future of reproduction in the modern world and the validity or otherwise of the assumptions made about it in the most recent World Population Prospects of the United Nations Convergence of fertility is a core component of almost all international population projections. In this paper, we consider the inclusion of the 'fertility recovery in East Asia' as a justification for the model. As well as questioning the extent to which the fertility has, indeed recovered in East Asia, we examine data concerning fertility intentions - which is, perhaps, one possible justification for assuming a fertility recovery - and find the evidence unconvincing. In particular, we present novel findings of a systematic review of fertility intentions in China over the past 30 years. Finally, we present evidence from a new global internet survey of population experts and a recent discussion of the prospects for global convergence of fertility.

07-2

Fertility Timing, Wages and Family Friendly Firm Policies in Japan

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The purpose of this paper is to analyze the marriage timing as well as the fertility timing of the Japanese young women, the effect of education and employment opportunities including wage level and family friendly policies at the firms women works.

In the face of the fertility decline, the government has strengthened Child Care and Family Care Leave of 1991, with amendment on 1995, 2001, 2004, 2007, 2008, and 2010 so that women can go back to work after leave period upon childbirth. The government also implemented the Equal Employment Opportunity Law of 1985, its amendment in 1997, 1999, and 2007 to better the work opportunity for women. It is a puzzle to find that yet around seventy percent of women are found to be full-time homemakers when their first child is of age one, and the percentage has stayed the same for more than thirty years. The newest result of the 14th Fertility Survey conducted by ISSPR again showed that the percentage of women who keep their work upon childbirth did not go on a rise despite the policy.

By using nationally sampled data collected in 2011, using competitive research fund from the Ministry of Education, Culture, Sports, Science and Technology, we made detailed questions on workplace traits of females and their dating partners and/or husbands, when they were thinking of getting married and considering of having the first child. We analyzed the duration of dating period to marriage and duration of marriage to the first child birth. We measured the effect of wage, the work hour flexibility, the firm's family friendly firm policies as well as age and educational level using cox proportional hazard models. We found that women with university degree working at family friendly firms tend to delay marriage timing.

07-3

Role of Gender Equity as the Fertility Escalator or Fertility Depressor in Hong Kong

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This paper rests primarily to investigate the role played by gender equity on fertility in Hong Kong. Two dimensions of this role are examined with the first stage pertaining to untangle the determinants of gender equity while the second stage putting the emphasis on tenacious linkage between fertility and gender equity. On the basis of a novel analytical framework by incorporating the unique qualities of gender equity of Hong Kong into changing dynamic of gender equity, several hypotheses about these two stages have been formulated. In an examination of three rounds of Knowledge, Attitude and Practice (KAP) Survey conducted by Family Planning Association of Hong Kong, quantitative analyses reveal that relative resources between husband and wife and normative context are important predictors of gender equity in Hong Kong. And the effect of relative resources on gender equity varies a lot across the normative context. While the cultural belief about gender equity is male authoritarian in the 1960s, relative resources play a significant role in shaping gender equity at home. On the other hand, relative resources waned in importance when the normative context about gender role is egalitarian in the 1980s. This interesting pattern confirms that gender equity is a changing process instead of a static phenomenon.

Furthermore, this paper has provided a reconciling ground towards the conflict between pure gender-based power imbalance model and McDonald's (2000) incompatibility of gender equity hypothesis concerning the relation between gender equity and fertility. Gender equity has been found to be negatively related to fertility because Hong Kong people no longer rely on parenthood seeking as a means to consolidate their marriage. However, since these two opposite forces operate between gender- based power imbalance model and McDonald's (2000) incompatibility of gender equity hypothesis, it is difficult to reach a conclusion which forces have dominating power. Hence, this paper has put the gender equity measures alongside with newly developed incompatibility index as a reconcile ground. And an inverse relation between gender equity and fertility is found to dominate McDonald's (2000) incompatibility of gender equity hypothesis.

07-4

Partnership Status and Attitudes toward Family Policies in Japan, South Korea and Singapore

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This study presents the results of a comparative analysis of the effects of partnership status on attitudes toward different types of family policies in Japan, South Korea and Singapore, drawing on microdata from the 2009 Survey on Comparative Study of Family Policies in East Asia (South Korea, Singapore and Japan), which was conducted by the Cabinet Office (Japanese Government).

The logit analysis with similar models shows that there do not seem to be too many commonalities among the three Asian societies in the effects of religion on attitudes toward family policies partly because of the under-reporting of cohabitation in South Korea in Japan and partly because of differences in the composition by partnership status of each population. For example, Japanese men who lost partners are more likely to favor pro-marriage policy, while Japanese women who are married and those who have ever cohabited are more likely to support the policy. Korean men who have ever cohabited are more likely to support Pro-marriage policy, while no partnership variables have significant effects among Korean women. Singaporean men who are married are more likely to support Pro-Marriage policy, but those who have ever cohabited are less likely, while no partnership variables are significant among Singaporean women.

On the other hand, Japanese men who are married are more likely to favor the support for childrearing but those who have never been partnered are less likely, while Japanese women who have ever-cohabited are more likely to favor it. Korean men who have lost partners and those who have never been partnered are less likely to favor the support for childrearing, while no partnership variables have significant effects among Korean women. Singaporean men who are married are more likely to favor the support for childrearing, while Singapore women who have ever cohabited are less likely to favor it.

The results for measure options for each policy will be presented at the time of presentation. In sum, the effects of the same partnership status on men and women are not always the same within the same society and across societies.

08-1

Below Replacement Fertility Level in Indonesia: Causes and Policy Responses

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In the early two decades, between 1971 and 1991, the total fertility rate (TFR) in Indonesia has rapidly declined for about 39-42% ranging from 5.29-5.81 to 3.22-3.35 respectively. Further, the TFR dropped more noticeably in the last almost two decades from about 3 children per woman in 1991 to at about 2.3 births in 2007. The level of fertility rate however differs markedly among provinces. Over 33 provinces, five of them have fertility at and well below replacement level where DI. Yogyakarta is to be the lowest at 1.5 point. It is argued that fertility behavior and socio-economic development are likely to follow the pattern of other developed countries in explaining a rapid decline of fertility in this province and the implementation of anti-natal's policy could not be undermined. Utilizing data primarily from Indonesian Demographic and Health Survey (IDHS in series), Indonesian Population Census (IPC in series) and other related data, the analysis consists of descriptive as well as multivariate analysis. The multivariate analysis is based on cross sectional analysis using path analysis and measured by children ever born (CEB). The measurement of socio-economic contribution factors which leads to the declining fertility level will apply the R^2 (R square) where the socio economic factor is focused on education attainment, age at first marriage, household income and women participation in the labor force. The control variables are age and marital status. The policy measures involved here are age at first marriage, age at first birth and contraceptive use. Fertility behavior of women in DI. Yogyakarta confirms that there is a consistent shift from favoring more to smaller size of family. It mainly includes later marriage, prolong birth spacing and to some extent less marriage. The trend in the TFR due to socioeconomic factors largely caused by educational gains by women, a larger proportion of women in the labor force and a changing values about marriage. From policy point of view, age at first marriage has a highest predicting power. The study ends up with a discussion for further policy implications in DI. Yogyakarta if so far, no available sensitive and responsive measures are put in place.

08-2

Fertility development and policy in Mongolia

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Mongolia constitutes an exception not only in regard of its fertility level, but also in respect of the fact that fertility is increasing since 2005. The total fertility rate reached its historical nadir in 2005 with a level of 1.95 children per woman. Since then, Mongolian total fertility rate is on the rise.
Mongolia constitutes a somewhat unique case. Mongolia has one of the lowest population densities in the world, at 2.78 million population over a land area of 1,565,000 square kilometres. Besides being characterized today by a rather higher and increasing total fertility rate in comparison to other East Asian countries, Mongolia presents also a distinctive historical path. During nearly 70 years (1924-1991), Mongolia was the only East Asian country to belong to the USSR sphere of influence. The choice to pursue a socialism way of development influenced greatly Mongolian society.

As population was as a central variable in the planning and development of the Mongolian economy, the Third Five-Year Plan (1961-65) decided to implement official and explicit pro-natalist measures. Various family and fertility incentives were allowed to married couples, mothers and large families, special tax on unmarried adults and childless families were perceived; and adoption of labour code protecting working mothers and assisting them financially. At the same time, contraception, sterilisation, and abortion were prohibited or restricted only to medical cases. As a result, Mongolian fertility peaked at 7-8 children per woman in the 1960s-early 1970s.

The onset of fertility decline started in the mid-1970s, paralleled the change in governmental support to fertility and family. Since 1976, the strong pro-natalist policy relaxed with the legalization of IUD insertions. By the year 1989, all restrictions on abortion and contraceptives access were removed. From 7-8 children per woman during the 1960s and early 1970s, Mongolian fertility declined to 4.6 children per woman in 1989. With the end of the socialist system in 1990, the transition to democracy and market economy during the 1990s, and the gradual free access to contraceptives since 1992, fertility dropped to reach 2.53 children per woman in 1993 and the replacement level of 2.1 in 2002.
That fertility has reached a below replacement level in 2005 turned out to be a concern for Mongolian government. Truthful to the socialism tradition, unambiguous fertility and family incentives and supports have been recently adopted. As a hypothetical result, fertility increased to 2.07 children per woman in 2006 and to 2.34 children per woman in 2007, 2.6 children per woman in 2008, 2.7 children per woman in 2009 and 2.4 children per woman in 2010.

The experiences of Mongolia suggest that the policy responses to stabilize and/or invert the declining course of fertility must be early and ambitious.

08-3

Fertility Decline in Contemporary India: Increasing Role of the Marriage Institution

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India is likely to close its demographic transition soon. The birth rate of India which was around 40 in 1950s has already come down to 22. The total fertility rate during this time has declined from about 7 to 2.6. Moreover, along with decline of mortality and fertility (TFR) India is also experiencing the process of population aging. Even with the same level of TFR due to aging of population a speedier decline in birth rate is expected in the future. Some states of India have already attained a below replacement fertility. In this context a question arises: will India also have second demographic transition leading to below replacement fertility or while the national level fertility remains at the replacement level there will be marked regional differentials in fertility. This paper attempts to explore these and similar questions on the basis of SRS data released recently and published data from other national sources.

This paper shows that the family size norms in India are stabilizing at levels which can retain the marital fertility much above the replacement level. Yet, due to unemployment, rising aspirations, greater demands of educating children and economic burden are forcing many young adults to marry late. This depresses fertility in the age group 15-19 and 20-24. As a result of this TFR among the urban educated people has reached the replacement level and has a tendency to move towards a low level of 1.5. Various evidences indicate that in India a process of postmodernization of demographic regime is on: different cultural and socio-economic regions are responding to mortality decline in different ways. The data on the relationship between education and fertility from Kerala suggests that if there is improvement in income there is also a possibility of the third demographic transition.

08-4

Fertility, Abortion and Sex Ratio at Birth in Provinces Dominated by One-Child Policy in China

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China's 1-child policy is unique in the history of the world for population control. It it is unevenly enforced - strictly enacted in some provinces, but not in others. After 40 years of implementation, its end is not insight. One reason may be that the true effect of 1-child policy on fertility in China was not seen because the majority of previous studies were conducted at country-level, which introduced underestimate of the effect of the policy on fertility. In this paper, I selected all the provinces dominated by 1-child policy and examined their fertility level and patterns of abortion and sex ratio at birth (SRB) between 1986 and 2000.

Data used for this study come from: a systematic review of population policies across China; strategy report on China's sustainable development in 2000; the 2000 census; and the 2001 national family planning and reproductive health survey (NFPRH). The main statistical methods include descriptive methods, Chi-square test, parity progression ratio, multilevel logistic and Poisson regression.

TFR_{ppr} in provinces dominated by 1-child policy fell from 1986 (1.69) to 2000 (1.15). The declining trend is mainly attributable to the fall in progression to second birth because progression to first birth. Sex-specific progression to second birth shows that women whose first birth was a daughter were more likely to have a second birth than those whose first birth was a son. It is noted that $P_{1\text{-}2}$-girl declined faster than $P_{1\text{-}2}$-boy in late 1990s.

The abortion trends after first and second births look reasonable: they start at a moderate level in the first year, reach a peak in the second year and decline in the following years after an index birth. Abortion pattern after first birth for women without a second birth differs from that between first and second birth for women having a second birth; the former followed a general trend as above while the latter was lower and relatively stable during early several years after first birth. These differentials may reflect effects of fertility regulations on birth interval and timing of effective contraceptive method adoption after first birth. The slightly higher abortion rates for women having a daughter than for those having a son during the fourth and sixth years after a first birth provides some evidences of sex-selective abortions for women having only a daughter.

SRB was significantly imbalanced in 1990s. Sex ratios of first births and the ratios of second births in other periods were not significantly distorted, which were due partly to small sample sizes in this study. Distortion in SRBs in the early 1990s can largely attributed to the tightening up of population policy and wide availability of B-ultrasound machine during that time.

09-1

Period and Cohort Parity Progression Indicators for Asian Countries Based on MICS3 Microdata

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MICS3 is a standardized survey program administered by UNICEF between 2005 and 2009 in more than 50 developing countries whose purpose was to estimate development indicators for children and women (UNICEF, 2008). While estimating fertility was not among the goals of the program, there are a number of questions that allow for direct estimation of fertility based on the module for women, and for indirect estimation based on the household and children modules. In particular there are direct questions about date of first marriage, date of first birth, date of last birth, children ever born and children surviving by sex. Since many of the countries participating in the MICS3 program were countries for which fertility data is sparse, age-specific fertility rates for the year before the survey were estimated for some countries by the United Nations (*World Fertility Data 2008*) based on date of last birth. Some analysis of fertility based on date of first and last birth has been done for Kazakhstan, Kyrgyzstan and Tajikistan (Agadjanian et al., 2011; Clifford et al., 2010) but this would be the first multi-country comparative analysis.

In particular, the following pieces of analysis will be presented:

- (a) Period first marriage and first birth intensities and derived indicators (Total first marriage rate, TFR of order 1, mean ages at birth) by education level, including trends for fifteen years, and tempo-adjusted first birth intensities.
- (b) Cohort progression to first marriage and first-birth, and children ever born by education level.
- (c) Reconstructed TFR dynamics based on indirect estimation approaches by level of education. A variation on the own-children method can be applied to the MICS data in order to reconstruct the birth histories for women of parity 3 and above (up to parity 2, the complete birth history is known), conditional on the dates of first and last birth, and information about children living with the mother from the children and household modules. Depending on fertility levels, complete surviving birth histories will be available for most women. Dates of birth for non-surviving and non-coresiding children can be imputed based on nearest neighbor techniques as have been applied to Mexico and Brazil census data by Rios-Neto, Miranda-Ribeiro and Ortega (2007, 2008).
- (d) Reconstructed birth-interval indicators based on the same reconstruction technique mentioned above.

The surveys analyzed include Kazakhstan 2006, Kyrgyzstan 2005-06, Tajikistan 2005, Uzbekistan 2006 in Central Asia; Mongolia, 2005, Thailand 2005-06, Vanuatu 2007 and Viet Nam 2006 in East Asia and the Pacific; Iraq 2006, Palestinians in Lebanon 2006, Syrian Arab Republic 2006, Yemen 2006 in the Middle East, and Bangladesh 2006 in South Asia.

09-2

Fertility Decline in India : 1971-2006 : Some Salient Features

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Fertility in India has declined noticeably from a TFR (Total Fertility Rate) of 5.5 in 1971 to 2.8 in 2006, a dip of about 50 percent. How this decline has come about?, is the main concern of the present investigation.

Assuming that a hypothetical cohort of women experiences a given set of ASFR (Age-specific Fertility Rates) during it's reproductive life time, and is not affected by mortality, as it is assumed in obtaining the fertility measure - TFR, Non-reproductive Life Table (NRLT) and Expected Parity Distribution are constructed, and the following measures are obtained : TFR, ICB (Intensity of Childbearing), UPWNR (Ultimate Proportion of Women Not Reproducing), m (Mean age of ASFR schedule), eM(15) [Expectation of years of Motherhood at age 15 years i.e. at the beginning of reproductive life time], AFB (Average age at First Birth), ALB (Average age at Last Birth), RLT-PPR (Reproductive Life Table Parity Progression Ratio), and RLT-CBI (Reproductive Life Table Closed Birth Interval). It may be noted that these measures are standardized measures and therefore are very useful for comparing fertility conditions over time and between populations. These measures were obtained for India for the years 1971, 1984, 2001, 2003 & 2006, for examining the changes in the fertility conditions.
It is found that the UPWNR increased dramatically during the period 1971-2006, as it's value in 2006 is nearly 24 times of that in 1971. The expected total years of motherhood, eM(15), declined continuously from 28.5 years in 1971 to 25.9 years in 2006. While AFB increased only by about 5 percent, ALB decreased by about 20 percent, indicating that fertility control at later ages has played a more significant role than the effect of postponement of births at younger ages. This is also reflected by the changes in RLT-PPR. While RLT-PPR(0,1) decreased only by about 5 percent during 1971-2006, RLT-PPR(1,2) decreased by about 16 percent, and RLT-PPR(2,3) & RLT-PPR(3,4) declined by about 30 percent and 40 percent respectively. Further, the expected closed birth interval, RLT-CBI(1,2) decreased by about 10 percent only during the period 1971-2006, whereas RLT-CBI(2,3) & RLT-CBI(3,4) showed a decrease of about 17 percent and of about 22 percent respectively. This indicates that women in India are trying to finish their reproduction faster in recent years , when they go to higher parity births for some reason.

09-3

Education and Fertility Revisited: A Multilevel Study in Today's High Fertility World

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Education plays a multidimensional role in the process of the fertility transition. Education and especially educating women does not only have a direct impact on the desired number of children, but also influences most supply and demand factors of fertility. The mechanisms describing fertility require the consideration of a set of factors besides pure socio-economic determinants. Individuals' fertility decisions are subject to their environment, societal values, family and friends. Also, today's developing regions can learn from experiences of countries further ahead in the demographic transition. I will assess the impact of education on fertility outcomes relative to economic factors, gender equality, availability of family planning and child mortality over time, using data from the Demographic and Health Surveys (DHS). Employing multilevel modeling techniques allows separating individual effects from contextual effects. This study is an attempt to better understand fertility outcomes in today's high fertility countries in Africa, Latin America and Asia, by quantifying the effects of education relative to other socioeconomic indicators.

09-4

The Second Demographic Transition in Singapore: An Application of Tempo and Quantum Decomposition Based on Bongaarts-Feeney Formula

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I observe Singapore's total fertility rates by the major ethnic groups for the period after TFRs achieved the replacement level, with a reference to the timing of the pronatal policy implementation. Based on own calculation using publicized statistical tables by Singapore government, I decompose the change of the period TFRs into contributions of quantum- and tempo- effects. Moreover, I construct a hypothetical period fertility measure which has an interpretation of the TFR driven only by the contribution of the quantum change. In order to achieve the decomposition, new method is proposed. The method, which is developed based on a modification of the Bongaarts-Feeney adjustment formula, is easy to apply even with limited data availability as the Singapore case.

The results show differences between Chinese's period fertility measures and Malay's counterparts not only in trends but also in determinants. Time trends of Chinese period fertility measures reveal that Chinese fertility has driven mainly due to the quantum effect, while the tempo effect has played a role for Malays.

10-1

Pathways of Fertility Change among Poor and Non-poor in Asian Countries

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During the two decades between the late 1960s and the late 1980s, Asian fertility fell by 39 percent. It is worth mentioning that major fertility decline in Asia have occurred in populations that are poor, with large rural and illiterate strata. This means that, since the fertility level is being controlled by the affluent group initially, the later decline in its level may be the response of the fertility control among the deprived section in the society. The study aims to investigate the levels, trends and differentials in fertility by economic status in selected Asian countries namely Bangladesh, India, Indonesia, Nepal, Philippines and Vietnam. However, these countries are in different stages in fertility transition. Three rounds of DHS surveys for each country (except Vietnam) have been considered which is helpful for trend analysis. Economic status is measured by computing a "wealth index", i.e. a composite indicator constructed by aggregating data on asset ownership and housing characteristics using principal components analysis (PCA). Computed wealth index has been standardized by taking the same asset indicators for each of the three periods of time. The lowest 33.3 percent is considered as ‘Poor' and the upper 33.3 percent is considered as ‘Non-poor'. Estimates of fertility are measured by the age-specific fertility rates (ASFR) and total fertility rates (TFR) to perceive the current fertility pattern in the three years preceding the survey. Place of residence, educational level of women and working status have been considered as independent variables in the study. Overall trends indicate that in the past fifteen years total fertility rates have declined upto less than three children per woman in Bangladesh (2.70), India (2.68), Indonesia (2.60), and Vietnam (1.87) except Nepal (3.10) and Philippines (3.30). Bifurcation of total fertility rates also revel the declining trend across economic stratum. There is no denial fact that fertility transition is well underway in these Asian countries, still the fertility level is relatively higher among women belonging to poor households than their counterparts. The remarkable fertility decline has been observed in Indonesia, Bangladesh and Vietnam especially among the poor as the pace of fertility decline was faster compared to the non-poor over the period of time. It is noteworthy that out of six countries both poor (2.02) and non-poor (1.88) women in Vietnam have achieved replacement levels fertility much earlier in 2002. In contrast, still the fertility level is far from satisfactory among the poor in Philippines (4.82), Nepal (4.31) and India (3.42) whereas the non-poor women in these countries are continued to be in the transitional or near replacement levels fertility. Fertility differentials by background characteristics reveals that urban poor, highly educated poor and working poor women had relatively lower fertility than their counterparts.

10-2

Fertility Differentials by Education in the Developing World: Persistence of the Asia-Latin America Contrast

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Fertility transition can be said to have begun in the developing world only about fifty years ago. Barring a few exceptions, the Total Fertility Rate (TFR) in the developing countries was of the order of 6-7 in the early 1960. But by now fertility has declined substantially in many of the developing countries. Though the progress has been slow in Africa, with only a few populations outside North Africa showing notable fertility declines, a large number of countries in Asia and Latin America have by now advanced well into the transition and some have already reached replacement or below replacement level low fertility. It is generally observed that during the process of transition differentials by socioeconomic factors emerge and then diminish, that is, first divergence takes place which is then followed by re-convergence. However, this does not seem to be happening in many populations. Moreover, a broad continental pattern is discernible in fertility differentials by education, the most prominent socioeconomic factor explaining fertility. The differences in the TFR by women's education are generally wider in many Latin American countries than Asian, though there is by no means uniformity within a continent. This pattern has persisted over the years in spite of continuing fertility transition. Comparative analyses of the World Fertility Survey (WFS) data of the 1970s showed that the differences by women's education were narrower in many Asian countries than Latin American and the same continental pattern is observed in successive rounds of the Demographic and Health Surveys (DHS). Fertility among sections with high educational levels is low in countries of both Latin America and Asia. On the other hand, for the less educated populations, fertility is high or moderately high in Latin America but fairly low in many Asian countries. This perhaps explains the success of many Asian populations in achieving low fertility in spite of the overall level of development not being high. One must, therefore, look at explanations of fertility transition beyond socioeconomic development and especially examine the ideational changes-diffusion of innovative behavior hypothesis. Diffusion across socioeconomic classes seems to have been faster in Asian countries than Latin American. It must be noted that many Asian countries have long had government population programs and differences are narrow in these countries, notably Indonesia, India, Bangladesh, and Vietnam. Besides, cultural settings could also have played some role. The paper presents the evidence on the patterns of fertility differentials, examines trends in these, and discusses plausible explanations.

10-3

Explaining the Stalling of Fertility Decline in the North-Eastern States of India, 1990-2005

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The North-eastern Region of India, comprising of the eight states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura, succumbed to a stalling of fertility decline since the middle of the 1990s. Data from three consecutive rounds of the National Family Health Surveys (NFHS) show that none of the states experienced a steady decline in fertility for the entire period from 1990-92 to 2003-05, which was marked by significant slowdown, and in some cases even reversal of the fertility decline witnessed during the preceding decades in these states. Fertility stalled at considerably high levels during the period 1990-92 to 1996-98, ranging from 2.9 births per woman in Mizoram to 4.6 in Meghalaya. During the following period, 1996-98 to 2003-05, fertility ranged from 2.4 births per woman in Assam to 3.7 births per woman in Nagaland, in the states that experienced a stall in fertility decline. The present paper explores the possible reasons for the observed stall in fertility decline among these states, using the analytical framework developed by Bongaarts (2006). The findings indicate that among the states where fertility stalled, the Government's family welfare program (presently known as the Reproductive and Child Health Programme in India) had faltered to some extent as indicated by the increase in unwanted fertility among currently married women in these states. In fact, the use of contraception was found to be low among all North-eastern states, and there was very little improvement in contraceptive prevalence rates from 1990-92 to 2003-05. Non-users of contraception indicated that contraceptive method related problem was the primary reason for non-use after the desire to bear more children. Among various indicators of socio-economic development, we find that the stall in fertility decline, especially during the period 1990-92 to 1996-98, was associated with increases in infant and child mortality. Finally, states where fertility decline did not stall have experienced relatively rapid increases in female literacy rate. From a policy perspective, improvement in the family welfare programme with a thrust on its IEC (information, education and communication) component has the potential of reducing fertility primarily by reducing unwanted fertility. The study also brings out that greater effort has to be made towards bringing down the infant and child mortality rates and increasing the female literacy rate in the North-eastern states of India if there has to be sustained fertility decline in the region in the coming years.

Keywords: North-east India; fertility stall; socio-economic determinants; fertility preference; family planning programs

10-4

Proximate Determinants and their Influences on Fertility Reduction in Vietnam

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In recent times, Vietnam has experienced rapid fertility decline. During 1989 to 1993 total fertility rate in Vietnam has fallen from 3.8 to 3.2. But there remains a demographic puzzle about the determinants of such rapid fertility decline. Some studies suggest that high rates of contraception use and induced abortion are more than enough to explains rapid fall in fertility. Keeping the above background in view, this paper tries to study the factors that are responsible for steep declines fertility recorded over the previous period in Vietnam. To be specific, the two major objectives of the present study are to understand levels and trends of fertility and its proximate determinants in Vietnam as well as to know the family planning inhibiting influence of principal proximate determinants. The study is based on the analysis of data obtained from the 1997 and 2002 Vietnam National Demographic Health Survey(VNDHS). The Bongaarts model is used here to determine the contribution to fertility decline of each of the four factors namely marriage, contraceptive use, induced abortion and postpartum infecundability. It is also found that these four factors explain about 96 percent of fertility changes in some populations. The fertility-inhibiting effects of the most important determinants are quantified in Bongaarts model by four indices, each of which assumes a value between 0 and 1. When the index is close to 1, the proximate determinant will have a negligible inhibiting effect on fertility, whereas when it takes a value of 0, it will have a large inhibiting effect. The analysis shows that change in proportion of married women, contraceptive use and induced abortion are generally the main factor responsible for fertility change at the national level and rural areas during 1997-2002. For urban areas, the change in induced abortion, postpartum infecundability and proportion of married women are generally the main factor responsible for fertility change during the same period whereas contraceptive use has marginal effect. The study gives a clear indication that estimated TFR is probably smaller than the actual one. The difference between actual and estimated TFR have narrowed down. In view of the above findings, it is suggested that there should be area specific IEC activities and intervention programs should be encouraged to retain the speed of fertility decline in Vietnam. Besides this, as induced abortion has emerged as an important factor of fertility decline, government and NGOs should try to provide safe abortion facilities for the betterment of women's health. Again, as contraceptive use is found to have least influence on fertility decline, policy makers should try to ensure accessibility as well as affordability of good quality contraceptive methods to decrease number of induced abortion and for better reproductive health of the women in the long run.

11-1

Households in Contemporary Southeast Asia

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Drawing on original empirical research, this paper will provide a comparative and comprehensive portrait of household composition, size and structure in Southeast Asia, using data from various rounds of Demographic Health Surveys (DHS) and Multiple Indicator Cluster Survey (MICS), both of which collected detailed information on household membership. Countries included in the analyses are Cambodia, Indonesia, Philippines, Thailand, Vietnam and Laos. For many countries, data are available from both the late 1980s and from mid-2000s, allowing for tracking changes over the last two to three decades. Preliminary results point to similarities across countries in the region on several aspects of households. For instance, nuclear household is the most common household type in all countries. However there are important differences between countries on other aspects of households. Percent of households that are headed by females, for example, is not similar across countries. For all countries, separate analysis was carried out for rural and urban regions. While there are clear rural and urban differentials in many aspects of households, the direction and magnitude of the difference varies by country. Overall, the results show both the diversity and similarities in households in Southeast Asia. The results are interpreted by situating them within the broader historical, cultural, social and demographic frameworks.

11-2

Determinants of Marriage Dissolution in India

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In India, very few studies have been carried out to understand marital dissolution in the recent past and there is no study covering individual level data and using advanced statistical analyses. This paper is based on a unique data set on the event history of marriage and divorce collected in District Level Household Survey-3 (2007-08) which is one of the largest ever demographic and health surveys carried out in India, covering all the districts of country. This survey provides information for the first time on the timing of divorce and it is the most recent data on marriage dissolution. This paper investigates the factors affecting marriage dissolution in India and geographical regions using multivariate hazard analysis. It is found that age at marriage is an important factor affecting marriage dissolution after controlling all other socio-economic variables. Women marrying at later ages are at greater risk of marriage dissolution, i.e. 1.2 times more than those marrying at early ages. Chances of getting divorced declines with increasing level of education and it is found that women literate above high school are at lower risk compared to those literate below high school. Childless women are at greater risk of marriage dissolution. The results suggest that dissolution rates are quite higher in the northeastern, western and southern regions as compared to the northern, central and eastern regions.

11-3

Social and Demographic Correlates of Changes in Divorce Rates in Iran during 2004 - 2010 and Its Implications for Family Dynamics in Iran

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Modernization and expansion of health facilities, improving living conditions in contemporary Iran has provided conditions to forsake the fertility transition and to be situated at the near end of second demographic transition. Although due to, modernization efforts, drastic changes in literacy rates, and higher level of standard of living, the second demographic transition in Iran started, in limited scale, before its departure from the first demographic transition, the family transition and changes in the structure, composition and living arrangements of Iranian families, as one of the most prominent features of the second stage has accelerated in recent years mainly due to mass communication revolution.

In the frame of family transition, total fertility rate reached below replacement level (1.9) in 2006. Age at marriage has increased steadily from 18.4 in 1966 to 23,3 in 2006 and has been rising ever since. Number of divorces recorded during the 15-year period from 1996 to 2010 has doubled and has approached from around 8 divorces in one hundred marriages in 1996 to 15 divorces per one hundred marriages in 2010. The highest number of divorces took place in the first five years of marriage and the pace of increase in rate of divorce has surpassed the pace of increase in marriage in Iran in recent years.

Given the fact that the birth cohort of 1980s (Baby Boom) in Iran is approaching mean age of marriage further changes in family dynamics, family structure, mean age at marriage, marriage rates, divorce rates are expected. Using National Registration Archives data, the social and demographic determinants of rising divorce rates during the period of 2004 to 2010 is analyzed and its further implications for future family dynamics, family structure, family composition, and living arrangements are the future is investigated.

Keywords: demographic transition, divorce, birth cohort, registration.

11-4

Work and Migration Correlates of Marriage Timing among Muslims in Metro Manila

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The study explores how work and migration influence the timing of marriage among male Muslims in ages 20-49 between 2007 and 2011 in Metropolitan Manila. Data from the currently ongoing Social Survey of the Muslim Population in three Islamic communities in Manila, Taguig and Quezon cities will be used. Results from a parsimonious discrete-time logistic regression model on the likelihood of marriage based on person-month data during the 5-year period will be analyzed. Fixed effects of characteristics of family of orientation and individual characteristics such as education and work status before 2007 will be estimated.

12-1

Evaluating the Measurement Reliabilities of Developmental Idealism Measures

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This paper investigates the measurement properties of empirical measures of developmental idealism. Developmental idealism is a set of beliefs and values stating that modern societies and families are better than traditional ones, that modern families facilitate modern societies, and that modern societies foster modern families. Previous research has argued that developmental idealism is widespread internationally and has had important effects on an extensive and important range of demographic behaviors, including marriage, fertility, nonmarital childbearing, divorce, living arrangements, and intergenerational relations. Although this research provides widespread evidence that developmental idealism has been widely disseminated, it provides little evidence about whether beliefs concerning developmental idealism can be measured reliably at the individual level. This gap is important, because without reliable indicators at the individual level, it is difficult to estimate effects of developmental idealism at the individual level.

We take a first step toward overcoming this gap by estimating levels of reliability of such measures using multiple conceptualizations of the factor structure underlying the empirical observations. We estimate measurement reliabilities using survey data collected in 2007 and 2008 from Argentina, China, and Egypt. The data indicate that when we have family items that are measuring very similar underlying constructs, the measurement reliabilities are very high. This result is demonstrated by the high reliabilities for three closely related items about the association of development with nonmarital fertility, cohabitation, and premarital sex, which have factor loadings ranging from 0.73 to 0.87 in Argentina, from 0.77 to 0.99 in China, and from 0.90 to 0.97 in Egypt. Similarly, Cronbach's alphas for the factor combining these variables range from 0.84 to 0.96. For such high loadings and Cronbach alphas to occur, these three items are not only measuring the same thing, but are doing so very reliably.

We also investigate the conceptual and measurement properties of a wide range of other survey measures asking about the association between development and fertility, marital arrangements, divorce, age at marriage, living arrangements, gender equality, and other family factors. The reliabilities and Cronbach alphas are not as high as for the three items discussed above but are still substantial. Our interpretation is that these items are also measured reliably but are measuring somewhat different constructs.

These results provide evidence that the constructs of developmental idealism can be measured with a high degree of reliability. This means that they are available for inclusion in surveys designed to measure the influence of developmental idealism on marriage, fertility, nonmarital childbearing, divorce, living arrangements, intergenerational relations and other demographic factors.

12-2

War, Military Service, and First Marriage Timing in Northern Vietnam

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As wars exert increasing force on global affairs, there is greater demand for understanding the international diversity of family experiences with conflicts. This study examines the relationship between military participation during the Vietnam War (1965-1975) and first-marriage timing among northern Vietnamese men and women. Based on the Vietnam Longitudinal Survey and its recent follow-up, this paper describes cohort variations in the likelihood and timing of first marriage during pre-war, wartime, and post-war years and addresses the effects of veteran status, combat exposure, duration and timing of service. We find war did not decrease marriage likelihood among men but caused significant delays in first-marriage among veterans. Except for urban women, female first-marriage timing was largely immune from war impacts. Parental role in mate selection, residential propinquity, and post-nuptial living arrangement helped facilitating wartime union formation. We extend the present discussion of marriage resilience to shed light on Vietnam's current marriage trends and the "flight from marriage" patterns in Pacific Asia.

12-3

Trends in the Timing of First Marriage in Taiwan: Differences by Cohort, Education, and Ethnicity

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Taiwan has confronted the demographic challenges such as extra low fertility rate and delayed family formation in the past decade. Empirical studies have observed the diverging trends in the timing and patterns of marriage resulted from a confluence of interrelated economic, social, and cultural changes. More importantly, women are continuing to postpone motherhood to an older age and this process of postponement is lowering the birth rate. To explore the extent of late and less marriage, this study analyzes the trends in timing of entry into first marriage among Taiwanese. Using event history analysis, the variations in mean age at first marriage associated with educational attainment and ethnic background are examined across several birth cohorts. Data are derived from the Taiwan Social Change Survey collected in 1991, 1996, 2001 and 2006. By pooling and arranging these data based on birth cohorts, our study shows that early and universal marriage has shifted toward late and less marriage, a changing trend being particularly salient among younger Taiwanese. Consistent with our expectations, educational attainment is negatively associated with mean age at first marriage. However, the rapid increase in age at marriage and the decreasing proportion of ever-marrying of higher educated women and lowest educated men actually pinpoints a marriage market mismatched in Taiwan. Regardless of gender, mainlanders (who moved from China to Taiwan after the Civil War and their descendants) are most likely to postpone their marriages than other ethnic groups. Although the majority of female aboriginals have been married in their twenties, many male aboriginals were single at the same ages and actually faced difficulties in finding potential partners.

12-4

Marriage and Relationship Patterns among Young Adults in Greater Jakarta

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In Indonesia, marriage remains a near universal phenomenon, and it represents an important life course marker for young adults to go through. Like in many other countries around the world though, marriage is increasingly being delayed in Indonesia, as evidenced by the increase in age at first marriage among men and women. The delay in marriage is due to different social factors including the increased time spent in education by young women, and increased female labour force participation. These trends are particularly evident in urban areas such as Greater Jakarta.
In the first part of the paper we investigate recent trends in age at marriage from different sources of information including analysis of the Demographic and Health Surveys and census data. While data sources such as the census and various social surveys can give us broad indicators of changes in marriage patterns, particularly in relation to age at marriage, there is a lack of information surrounding other aspects of the marriage process. Therefore in the second part of the paper we examine the more detailed information about marriage patterns that was collected in the 2010 Greater Jakarta Transition to Adulthood Survey (GJTAS). This survey interviewed young men and women aged 20-34 years old (N=3,006) living in Jakarta, Tangerang and Bekasi and collected information about relationship and marriage behaviour which have previously remained unexplored. In addition to looking at traditional indicators such as age at first marriage, we also look at number of additional questions:

· For how long did individuals date their partner before marrying them?
· For how long were individuals engaged with their partner before marrying them?
· Where did individuals meet their spouses (e.g. at school/university, work place, through religious association, through friends, met outside at a market or other public place, arranged marriage by parents)?

For individuals who are currently not married we examine:
· Whether or not they are dating?
· Their plans regarding marriage
· Their reasons for not planning to marry their current partner?

In all analysis we examine differences in marriage and relationship behaviour across cohorts, and by respondents' socio-economic and demographic characteristics including sex, highest education, parental socio-economic status, migration status, religion and ethnicity.

12-5

Evolving Union Patterns in Asia-Pacific sincearound 1970

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The recent changes in marriage and union formation in Asia-Pacific characterized by a postponement of marriage and increasing celibacy have caught the attention of the researchers (Jones, 2005, 2007; Jones and Gubhaju, 2009, Jones et al. 2011, compared to Smith, 1980), but has generally focused only on a subset of countries. The purpose of this paper is to provide an overall picture of changes in marriage and union formation throughout the region based on National country data for every country in the region. For that purpose I use the recently compiled database on *World Marriage Data 2008* (United Nations, 2009) covering information from National sources on marital status, SMAM and period marriage and divorce data since around 1970, complemented by more recent data for those countries where data is available and the latest date included in *World Marriage Data* was prior to 2000 or there were less than 3 data points available. In particular, the distribution by marital status has also been tabulated from microdata for all the countries participating in MICS3 surveys.

The focus of the article is on establishing regional trends in union formation by looking at trends in a number of indicators like (a) SMAM and indirect median age at first marriage for men and women as indicators of marriage timing, (b) permanent celibacy as measured by the proportion single at ages 40 and above, (c) early marriage as measured by the proportion married in the 15-19 age group, or the proportion married by age 20 for men and women (Mensch et al., 2005), (d) Trends in the spousal age-gap based on the comparison of SMAM for men and women (Carmichael, 2011) (e) Trends in the proportion divorced/separated by age 40-44. The results will be analyzed by computing regional and sub-regional trends, and plotted in regional maps, together with a first exploration of the extent to which these changes are relevant for understanding fertility decline in Asia-Pacific, and the patterns of adolescent fertility in the region.

13-1

Early Marriage in Bangladesh: Not as Early as It Appears

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Bangladesh has long been known for very early female age at marriage and high teenage fertility. Other culturally similar countries in Asia like Nepal, India and Pakistan have considerably higher ages at marriage. The government of Bangladesh has made substantial investments since the 1990s to increase female age at marriage, primarily through secondary school stipend schemes, and enrolments have increased as a result. Yet the mean age at marriage appears to have remained unchanged at around 16 years. Using Matlab HDSS data, this study aims to assess if misreporting of age at marriage could be contributing to the apparent persistence of early marriage and early childbearing in the country. In this sample of 1800 never and ever married women aged between 15 and 30, almost two-thirds (63%) misreported their age at marriage, but not randomly - 56% under-reported while only 7% over-reported their age at first marriage. Women with little schooling and from lower wealth quintiles understated their age to a greater extent than did women from other groups in the study. Among the currently married group aged 20-24, the reported mean age at first marriage was 16.8 years which is comparable to the 2007 BDHS age of 16.4 years. However a cross check with their actual date of birth recorded in HDSS reveals that the true age at marriage was 18.6 years - giving a difference of almost two years between the reported and actual age at marriage. Almost 40% of those currently aged 20-24 in this study reported they were married before the legal minimum age of 18 years when in actual fact only 23% of them were. This is quite far from the 2007 DHS finding that 66% of Bangladeshi women aged 20-24 were married before age 18. Misreporting is also reflected in the mean age at first birth; the actual age is 1.5 years older than the reported age thus suggesting that the extent of teenage childbearing is lower in the country than what is reported in DHS. Calculation of age specific fertility rates for 5-year age groups using reported and actual ages at firth birth indicates that the extent of teenage childbearing may be overstated in the DHS reports by as much as half. Rising dowry is identified as a primary determinant of age misreporting, with the level of dowry increasing with increasing age of the bride for various socio-cultural factors. This paper concludes that the mean age at first marriage among Bangladeshi women has actually been increasing despite the stagnant picture portrayed by successive DHS reports.

13-2

Early Marriage and Reproductive Health Outcomes among Urban Women in Uttar Pradesh, India

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In India, age at first marriage marks the beginning of the socially acceptable exposure period during which a woman may become pregnant. Women who marry at a young age endure a longer period of exposure to pregnancy, and therefore a greater number of births over the reproductive lifecourse. Nationally, more than half of women age 20-49 married before they reached the legal minimum age of 18 (NFHS-3). Previous research has documented poor fertility and health related outcomes among Indian women who married at an early age, yet little is known about the diversity of experiences among women within urban settings.

The objective of this study is to explore the associations of early marriage and reproductive health outcomes among urban women age 20-49 in Uttar Pradesh, India.

Baseline data were collected in 2010 for the Measurement, Learning and Evaluation project for the Urban Reproductive Health Initiative; 17,643 currently married women were interviewed in six cities of Uttar Pradesh, India. Women reported their age at first marriage, contraceptive use, full birth history, reproductive health outcomes, fertility preferences and other background characteristics.

We find that almost 35 percent of currently married women age 20-49 were under age 18 at the time of first marriage. This is slightly less than the national average of 47 percent (NFHS 2005/6). Only 16 percent of women who married before age 18 use a modern contraceptive method compared to 32 percent of women who married after age 18. Controlling for age, parity and other sociodemographic characteristics, the odds of using a modern contraceptive method among women who married before age 18 were lower compared to women who married at 18 or later. Multivariate logistic analysis shows that women who married early had much lower odds of delivering their last child in a health facility compared to women who married after age 18. There was no significant difference in the odds of whether the last child was wanted then, or later/not at all among women who married before 18, compared to women who married later. Further analysis will explore the associations of early age at marriage with early fertility and short birth spacing, as well as differences across cities. The prevalence of early marriage persists in urban UP. Multivariate analysis confirms that women who marry early experience poor health outcomes compared to women who marry later. Our results suggest programmatic efforts are still needed to reach urban adolescents. Empowerment programs directed towards young girls or recently wedded girls could focus on providing information, skills and support systems to change knowledge and attitudes about child marriage. Rigorous evaluation of existing government funded conditional cash transfer programs focused on delaying early marriage are neededto inform scale-up efforts of successful CCT programs.

13-3

Female Education and Opportunity Costs of Marriage and Childbearing in Iran

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The recent marriage postponement and fertility decline of Iranian women has strongly been related to improvements in their education. Given a very low female labour force participation in Iran, this paper aims to understand how the opportunity cost of women's time is influenced by their education. The paper hypothesises that education may have introduced alternative roles, other than occupational, to domestic and maternal roles which compete with marriage and childbearing behaviours. The data from the 2009 Time Use Survey, representing urban areas of Iran, is used to (1) examine whether the time never married women and married women without a recent childbirth allocate to distinctive roles differ by their education and (2) to determine whether these role priorities change the odds of marriage and childbearing. The findings suggest that education increases the allocation of time to some components of women's individual role, although time use patterns differ between never married women and married women without a recent childbirth. It can be concluded that these roles act as competing roles to domestic and maternal roles and influence the opportunity cost of women's time because the more time spent on these role, the lower are the odds of marriage and childbearing.
Key words: women' roles, education, opportunity cost, marriage, childbearing, Iran.

14-1

Understanding the Association between High-Risk Fertility and Childhood Mortality in India

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Infant mortality is one of the health indicators which largely vary within and across the countries. Extant of literature showed a number of determinants of infant mortality varying from socio-economic to demographic to healthcare practices. But there is a dearth of literature showing the association of infant mortality with risky fertility behaviours. In India, majority of women marry during their adolescence. These women are exposed to early childbearing as the use of family planning method is very limited in the country. These early childbearing bearing is often considered as risky fertility behaviour due to physical immaturity and limited use of healthcare practices. It may influence infant mortality in the country which needs to explore.

Accordingly, present study examines the association between high-risk fertility behaviour and childhood mortality (Infant and under-five mortality) in India using the data of third round of National Family Health Survey which is conducted during 2005-06. The indicators of high risk fertility behaviour are – low age at birth, short birth interval, higher birth order and combination all these three factors.

Descriptive analysis is used to understand the differentials in childhood mortality (infant and child mortality) across selected contextual factors along with high risk fertility behaviour. Mortality is estimated using life-table survival approach. Cox proportional hazard model is used to understand the significant association between high-risk fertility behaviour and childhood mortality after adjusting other contextual covariates. We have examined the interaction effect of combinations of high-risk fertility behaviour in order to find out the most vulnerable groups.

Preliminary result shows that about 50 percent of total births in the country were under any high-risk category which is avoidable. Infant mortality profoundly varies with age of mother, birth order, and previous birth interval. For instance, infant mortality is substantially higher – among adolescent mother, higher birth order children and with lesser birth interval period. Similar variation is observed with under-five mortality. After adjusting other factors, high risk fertility behaviour is significantly and negatively associated with infant and under-five mortality. Along with high-risk fertility behaviour, educational and socio-economic status of mother is also associated with the childhood mortality in the country.

The findings show that all categories of high-risk fertility are significantly and negatively associated with childhood mortality. However majority of this death are avoidable with specific interventions. For example, there is need of enforcement of legal age at marriage to minimize the infant death of adolescent mother. At the same time specific effort is required to encourage the adaptation of family planning methods to increase the gap in birth-interval in the country.

14-2

Survival Expectations by Smoking and Weight Status among Midlife Males in China and South Korea

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Evidence is accumulating that health behaviors play an important role in determining social inequalities in mortality. Less is known, however, about whether such mortality effects are understood by individuals who have health risk factors such as smoking and obesity. This question is potentially important because perceiving the mortality effects of common health risk factors may facilitate individual behavioral modifications as well as increase the effectiveness of structural and policy interventions at a population level. The main purpose of this paper is to examine whether midlife males in China and South Korea understand the mortality effects of smoking and weight problems, two of the most important risk factors for chronic diseases in this region. We use comparable datasets from these countries, the 2008 China Health and Retirement Longitudinal Study (CHARLS) and the 2006 Korea Longitudinal Study of Aging (KLoSA), both of which also have a structure comparable to that of the US Health and Retirement Study (HRS). The comparability of these three datasets allows for a more meaningful comparison of the study results between China and South Korea as well as between these two countries and the United States.

We estimate similar models of survival expectations as a function of smoking and weight status among midlife males aged 45-64, excluding individuals with a Body Mass Index lower than 18.5. Survival expectations are measured as a five-category ordinal variable of the possibility of reaching age 75 in CHARLS, and as a continuous variable of the subjective probability of reaching the same age ranging from 0 to 100 percent in KLoSA. Our main variables of interest are a set of indicator variables of smoking status (never smoker, former smoker, current light smoker, and current heavy smoker) and of weight status (normal weight, overweight, and obese). Our models control for education, age, marital status, whether rural or urban, and health status measures.

Our results reveal that current smoking and weight status are not associated with lower survival expectations in our samples from China and South Korea. These results are in contrast with those from studies using the early waves of HRS data that suggest smoking and obesity are associated with lower survival expectations. Further research is required to elucidate the lack of relationship between the key risk factors and survival expectations in these countries.

14-3

Demographic and Psychosocial Predictors of Smoking, Dinking, and Drug Use among the Youth in the Philippines: A Simultaneous Analysis of Adolescent Risk Behaviors

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The advancement in modern medicine enables us to control epidemics and even eradicate diseases that caused premature death. Nowadays, there are new threats to individual's health and well-being that is related to behavior and improper lifestyle. These new risks, the use and abuse of tobacco, alcohol, drugs & other substances, start out during the adolescent years. It is in this stage of one's life that the individual experiences physical and emotional changes. Their curiosity in trying out and experiencing new things lead them to explore the world of substance use and abuse.

The study aims to assess the relationships between demographic (age and sex), psychosocial (individual beliefs and values, family characteristics) and non-sexual risk behaviors (smoking, drinking, drug use). Studies of adolescent risk behaviors are often analyzed separately (smoking only, drinking only, or drug use only). However, these adolescent risk behaviors do not usually occur in isolation. By considering smoking, drinking, and/or drug use to occur simultaneously, the study presents a different perspective and a new methodological approach in which these behaviors are to be analyzed.

The study utilized the data from the Young Adult Fertility and Sexuality 3 (YAFS 3) Survey conducted in the Philippines in 2002. Participants are adolescents aged 15-24 years old. Binary Logistic Regression was used in the analysis, employing a hierarchical approach.

The results support previous findings on adolescent risk behaviors: being male and as one gets older significantly increase the likelihood of a person to smoke, drink, and/or use drugs; positive beliefs and attitudes significantly inhibit the tendency of the adolescents to have these risk behaviors; and having strict parents/guardians and having no family member who smokes, drinks, and/or uses drugs are significant deterrent factors.

14-4

Toward a better Understanding of Daily Mortality Changes

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When the number of deaths in a day is compared with that of the previous day, it may increase, decrease or remain the same. They create considerable fluctuations in daily mortality changes. Up to present, studies on daily mortality changes are largely undertaken by epidemiologists who tend to concentrate on the impact of environmental conditions on mortality changes.

In this paper, we will examine the following questions: 1) In addition to major environmental factors such as weather conditions and air quality, is there any other force that also affects the daily mortality changes? 2) Are there any regularity in the fluctuations in daily changes, and if yes, can we develop a better model to describe and explain such changes and their major 'determinants'? 3) Up to present, generalized additive models are used widely in modelling the environment-mortality relationship. These models however could only explain limited variations in daily mortality and their power in predicting daily mortality changes is still rather moderate. Can we further improve the available statistical tools to develop a better method that could increase the power of predicting daily mortality change? The study, through answering these questions, aims at further improving our knowledge about daily mortality changes and advancing technique development in modelling and predicting short-term mortality changes.

To answer these questions, we will use more than 5 million death records and environmental data collected from several Asian populations over the last 40 years. These records, especially those collected from East Asia, include detailed demographic information and have good quality. In this study, we will use standard demographic and statistical methods to systematically analyse these data. In addition, we will also use the widely used generalized additive model and our revised method to analyse the relationship between daily mortality and some factors (such as weather conditions, air quality and some factors that have not been examined up to now). These analytical results will be compared systematically. On the basis of that the pattern of daily mortality changes and their determinants will be further examined, and daily mortality changes will be predicted using our improved model.

14-5

Trends and Differentials Mortality in a very Low Mortality Population - the Case of the State of South Australia, Australia

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The state of South Australia has the lowest mortality in Australia, which in turn has one of the lowest levels of mortality in the world. In 2008-2010, life expectancy at birth in South Australia was 79.4 years for males and 83.8 years for females. A male surviving to age 65 could expect to live for another 18.8 years, while a male surviving to age 85 could expect to live for another 6 years. The corresponding figures for females are 21.8 and 7.1 years respectively. In 1881-1890, life expectancy at birth for males and females was 50.6 and 53.8 years respectively. Since 1971, life expectancy for males and females has increased in a linear fashion. In the ten years 1994-2005, the average annual gain in life expectancy has been 0.28 year for males and 0.24 year for females, indicating the continuation of the long-term narrowing of the gap between male and female life expectancies. This trend is expected to continue at least until 2015-2016. However, despite its high longevity, South Australia exhibits notable differentials in mortality. In addition to the sex-differential in life expectancy shown above, the seven statistical divisions of the state exhibit considerable mortality differentials for both sexes as indicated by standardised death rates. Further, there are differentials in morality with respect to indigenous status, occupation, country of birth and marital status. This paper examines these differentials for South Australia, compares them to those for Australia and attempts to provide explanations for the observed differentials and their implications for the future of South Australia's population. The time period covered by this analysis is 1990-1992 to 2006-2008.

15-1

Does Delay in Initiation of Treatment has Impact on Health Outcome?

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Delay in diagnosis has adverse implications on both disease prognosis at the individual level and transmission within the community. Co-infection of TB with HIV and drug-resistant tuberculosis has threatened to complicate the tuberculosis situation in the country. Social and cultural factors are also an important factor which plays an important role in compliance of TB patients (Khan et al., 2000). Present study tries to see the relationship between delays in initiation of treatment and health outcome. The framed null hypothesis is delay in treatment has no association with the health outcome. Data used is a small scale survey data collected by researcher from 367 tuberculosis patients registered under Revised National Tuberculosis Program (RNTCP) in 2009. Date of survey is October 2010-January 2011. Data has been collected from TB patients living in slums of Mumbai. Bi-variate and multi-variate technique has been used for the study. Binary logistic regression is used to see the relationship between health outcome and socioeconomic, delay and other independent variables. Wald test is used to test the proposed hypothesis.

Bi-variate result shows that only two percent of the patients made no delay in approaching health provider while six percent of male and five percent of female took more than one month to consult any health provider. Health outcome has been categorised into two broad categories i.e. successful/unsuccessful. Successful includes those who have either completed the treatment or been cured as per RNTCP and unsuccessful comprises of those who either defaulted or failed in treatment. Probability of success is higher among lower age group, currently married, higher educated and middle class people. Multi-variate result shows that female (OR: 4.8; $p<0.01$), extra pulmonary TB patients (OR: 2.9; $p<0.05$), Muslims (OR: 2.5; $p<0.05$) and working at the time of diagnosis (OR: 3.04; $p<0.01$) are more like to result with successful health outcomes. Patients making number of moves for treatment are 38% ($p<0.05$) less likely to result with successful health outcome. More number of moves involves visit to number of health providers which means it is initiation of effective treatment which affects more in successful health outcome. Though DOTS strategy is made freely available at every primary health centres (PHC) for tuberculosis treatment, people are not using it effectively. Therefore, there is strong need of right health care choice at the right time for success of treatment under DOTS program and eradication of tuberculosis. Counselling about the symptoms of diseases is also needed at grass root level to avoid the delay in treatment.

15-2

A Study on Body Weight Perception and Weight Management Behaviours among Married Women in India

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Globally there are more than one billion overweight adults and 300 million of them are obese. It is important to understand realistic perception of own body weight and also what determine accurate body weight and weight management behaviours for appropriate intervention. The aim of this paper is to examine:

1. women's perception about their own body weight status and their actual action and plan for weight management according to their socio-economic and demographic characteristics
2. determinants associated with the wrong perception about women's body weight status and actual action and plan for weight management

The study is carried out with primary data based on a follow-up survey of 325 women included in NFHS-2 (1999) in India's national capital territory of Delhi. Total 337 women, 113 normal, 124 overweight and 100 obese women were surveyed during the follow-up in 2003 through structured questionnaires. Detailed information was collected on woman's perception about her own weight status, and weight management behaviour (exercise and fasting pattern) which is the main response variable. The weight and height data have been used to calculate the BMI. The effect of obesity and factors on self perception of body weight and weight management behavior (exercise and fasting pattern) is estimated using logistic regression after adjusting for women's background characteristic such as age, education, media exposure, religion, caste/tribe, working status and wealth status.

Overall 17% of overweight and obese women perceived their body weight as normal. In multivariate analysis, non-working women (aOR:0.29;95%CI:0.09-0.93;p=0.037) and women not exposed to media (aOR:0.38;95%CI:0.15-0.97;p=0.043) were significantly less likely to have accurate self-perception of their body weight with reference to their counterparts.
More than two-thirds of overweight or obese women were not performing any kind of exercises. Multivariate results for exercise and fasting pattern substantiate that performance of exercise was significantly associated with women's higher education (aOR-6.5;95%CI:1.0-39.7,p=0.044) but not exposure to media (aOR-0.41, 95%CI:0.19-0.86,p=0.018) with reference to their counterparts whereas weekly fasting pattern among women was mostly determined by their religion. A significant proportion of overweight and obese women (14%) reported that they would like to maintain their weight as it is.

Our results show that there was a large discrepancy between self perceived body weight and actual body weight among Indian women. Effective strategies need to be designed and applied in the community through disseminating self perception of body weight information through mass media and school education to the general population. The health threat of obesity should be integrated within the general health system for its effective prevention and cure. Healthy behaviours need to be promoted and health-compromising behaviours should be discouraged to combat the threat of obesity and its associated risk factors among women in Urban India.

15-3

Intra-state Variations in Institutional Delivery in Uttar Pradesh: Results from Multilevel Analysis of DLHS-3 Data

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Uttar Pradesh is known to have a very poor level of maternal health as compared to the other states in India. The state stands at a fairly low level of institutional delivery and has very high maternal mortality, as compared to the national average. The rate of utilization of the institutions for delivery care varies across the regions of the state as well as across the sections of the population. The decision to deliver in a supervised or institutional setting is influenced by a vector of factors including the availability of the requisite health institutions and accessibility and the socio-economic conditions of the women. The possible causes of low level of institutional deliveries in Uttar Pradesh may be either the supply side (health services, public or private) or the demand side (individual and household socioeconomic factors). The studies done till now have covered primarily the demand side constraints but the reach of the state's program has received less attention. This paper tries to look at the problem of low utilization of maternal health care services through a broader framework including both the demand and the supply side variables.

Objectives are to analyze intra-state variations in institutional delivery in Uttar Pradesh, in relation with the socio-economic conditions of these districts and access the impact of health infrastructure, available in the districts, on institutional deliveries in Uttar Pradesh. This paper also investigates the factors, influencing the demand of utilization of institutional delivery care system in Uttar Pradesh.
Data for demand side factors have been taken from the District Level Household Surveys (DLHS). For the supply side factors, data from Department of Health and Family welfare, Uttar Pradesh and Economics and Statistics Division, State Planning Institute, Uttar Pradesh have been used. For the purpose of trend analysis, all the three phases of DLHS have been used. The methodologies, adopted for the study are: Trend analysis, Bivariate analysis, Multiple Linear Regression, Multivariate Logistic Regression and Multilevel Logit Regression.

The health infrastructure of the district plays an important role in determining the level of institutional deliveries. The districts with better physical health infrastructure and manpower employed in health service system have better rate of institutional deliveries. Further, differences in utilization of delivery care services are found with respect to socioeconomic background of women as has been seen in many other studies. A multilevel analysis, with the socio-economic conditions of women at the individual level and the health infrastructure at the village level in the multilevel logit model, reveals that the health infrastructure available in the different regions of the state has an impact over and above that of the individual variables, affecting the institutional delivery care utilization.

15-4

Effectiveness of a Behavior Change Communication Intervention in Increasing Knowledge and Perceptions about Safe Abortion Services: A Quasi-Experimental Study in Bihar and Jharkhand, India

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Despite the fact that abortion has been legal in India since 1971, the incidence of unsafe abortions remains high, primarily due to lack of awareness of the law. Unlike family planning and other reproductive health issues, community awareness on the legal aspects of safe abortion is extremely limited in India. To address this gap, a behavior change communication (BCC) intervention on comprehensive abortion care (CAC), including wall signs, street drama, and outreach activities was initiated in two districts of Bihar and Jharkhand. This study aimed to evaluate the efficacy of the first round of communication interventions to influence knowledge and attitudes about safe abortion services.

A quasi-experimental research design was used. Cross-sectional surveys were administered at baseline and follow-up in the intervention and comparison districts. Changes between baseline and follow-up were assessed using bivariate analyses. Regression difference-in-differences models were used to assess program effectiveness.

Exposure to CAC-related information improved significantly amongst women in intervention districts. Background characteristics of women such as education, caste, religion and family structure were associated with exposure to the BCC intervention. Exposure to the intervention was associated with increased knowledge about abortion among women in intervention districts, and a dose-response relationship was seen. Women in the intervention districts at follow-up had a higher odds of knowing that abortion is legal in India (AOR=16.1; 95% CI: 11.3 - 22.9) and where to access safe abortion services (AOR=1.9; 95% CI: 1.4 - 2.6). Women in the intervention districts at follow-up were also more likely to perceive higher levels of social support for abortion within their families (adjusted β=0.17, 95% CI: 0.04 - 0.31) and higher levels of self-efficacy with respect to family planning and abortion (adjusted β=0.18, 95% CI: 0.06 - 0.31). However, women in the intervention districts at follow-up also reported lower perceived levels of support for abortion within their communities (adjusted β=-0.22, 95% CI: -0.37 - -0.07).

This intervention was successful in improving knowledge and perceptions about abortion among women in rural Bihar and Jharkhand. Though women living in the intervention areas at follow-up were more likely to have greater knowledge about abortion and higher levels of perceived self-efficacy and perceived social support for abortion within their families, they were also less likely to perceive favorable social norms regarding abortion in their communities. This may indicate that a longer period of intervention is required to change norms at the community level. The identification of a dose-response relationship between intervention exposure and knowledge suggests that BCC interventions should aim to provide multiple exposures to information on abortion to maximize effectiveness.

16-1

Ten Year's Maoist Conflict and Displacement of Locals from Kathmandu Valley

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Much literature can be found on the displacement and forced migration of people from different parts of Nepal as direct consequences of the ten year's Maoist Conflict. Many people were displaced and forced to migrate as well to the urban centers, and especially to Kathmandu, for security purposes due to threat and extortion both from the then Nepal army as well as the Maoists. However, the displacement and migration of local people from the Kathmandu valley have been ignored in the academic circle. This is an indirect consequence of the conflict. Due to the conflict, a heavy population explosion, one of the highest, took place in the valley within the decade. The in-migrants to the valley were mostly the local elites from different places of origin. Therefore, most of them wished to have a piece of land in the valley and were willing to afford the high cost for it as well. As a consequence, the demand for land sharply increased the prices in the valley. This led to the increase in willingness to sell land by the locals to these in-migrants. Hence, the huge number of land transactions occurred that made most of these locals landless and/or with lesser land in their possession. Moreover, the land sellers mostly used the money in luxurious assets such as buying cars, motorbikes, building modern houses etc. The process induced migration and displacement of locals from the valley. There has been a shift of habitat from the core circle to the outside periphery circles and ultimately to outside the valley. Hence, the paper tries to analyze the relationship between the ten year's Maoist conflict and the pattern of displacement or migration in and from the Kathmandu Valley. For this, qualitative techniques have been used such as key informant interview, focus group discussion, unstructured questionnaire and case studies. The study also analyzes the policy implications on displacement and migration in the pre as well as the post-conflict period. It will also dig out the reasons behind the unwanted consequences of displacement and migration in the country with special reference to the policy failures.

16-2

Migration from East-Azerbaijan Province to Tehran Province during 1996-2006: Effects of Social Networks and Socio-Economic Status

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Tehran province contained about one-fifth of the total population of Iran in 2006. The province had a high level of positive net migration during last decades. At the same time, East-Azerbaijan province had a high level of negative net migration. Compared to other 29 provinces, East-Azerbaijan had the highest contribution (15%) to the in-migration of Tehran province. Using Iran 2006 census sample data, this paper aims to examine the main factors affecting the migration. Of 24700 migrants, 53% were male; 29% were head of the household; and 50% were aged 20-35 years. Target population for this study includes all migrants who were head of the household. About 96% of the heads were male with a mean age of 37 years. Only 14% had tertiary education and seeking a job, or a better job, was the main reason of migration for 80% of the migrants. Migrants from less developed districts of the origin place were more likely to settle in the similar types of districts at the destination place. Only 44% of migrants from urban areas and 23% from rural areas could settle in more developed districts of Tehran province. This can show a positive socio-economic relationship between the origin and destination places. Three relatively less privileged districts of East-Azerbaijan province namely Mianeh, Sarab and Hashtrood had highest out-migrants to Tehran province and also the three relatively less privileged districts of Tehran province namely Rabat-Karim, Islamshahr and shahryar had highest in-migrants from East-Azerbaijan province. Confirming the positive relationship, this can also reflect the importance of social networks between the two places. The findings can help to predict the future trends of population movements and formulate relevant policies.

16-3

The Relationship between Household Structure and Migration in Southeast Asia: Evidence from Global IPUMS Harmonized Census Data

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The relationships between migration and urbanization, and between migration and the rise of regional and global labor markets have dominated development and demographic policy discussions for the past 20 years (Oberai 1981; Skeldon 1990; UNFPA 1996, Guest 2003; IOM 2003; UN 2002, 2004; Skeldon 2006). At the same time, migration has been characterized as a risk-minimizing strategy for households to enhance their resource base (Sjaastad 1963, Skeldon 2005). Despite the recognition that household decisions influence both household and individual migration decisions, most research on individual determinants of migration has focused on age or gender (Hugo 1993; Lim 1993; Jones, Hull & Ahlburg 2000; Clausen 2002). No formal work has been done to incorporate household and family structure into analyses of migration.

The availability of consistently-coded census data from IPUMS, available from the Minnesota Population Center, facilitates cross-border and cross-temporal analysis of migration and urbanization. Because the data include variables identifying each individual's relationship to the household head, it is now possible to incorporate analysis of differences in household structure on migration. This paper will present a preliminary examination of the relationship between household structure and migration in those Southeast Asian countries available through the IPUMS: Cambodia, China, Indonesia, Maylasia, the Philippines, Thailand, and Vietnam.

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17-1

"Sex (Gender) and the City": Differences in the Rural-to-Urban Migration Experiences of Young Thai Men and Women

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Females dominate rural-to-urban migration streams throughout Southeast Asia due to expanded employment opportunities in urban areas. While economic motivations are among the most salient factors associated with rural-to-urban migration for both men and women, these and other aspects of the migration process differ by gender. Like other demographic processes, examining migration with a gender lens reveals a more nuanced picture of its causes and consequences. In previous work, we observed an increase in mental health status for female rural-to-urban migrants relative to their counterparts who stayed in the rural origin villages. We employ mixed methods to identify aspects of the migration process and associated life changes that affect mental health status. In particular, we examine differences by gender with the purpose of comparing and contrasting the male and female migration experiences in a way that provides a better understanding of the improved mental health status observed for female rural-to-urban migrants.

17-2

“Health Care Access and Health Seeking Behaviors among Rural-to-Urban Migrants: A case Study from Bandung and Makassar, Indonesia”

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There is a growing number of people from rural to urban areas to seek for a better life. The rural-urban migrants usually have no adequate skill and education. They often take job in self-employed jobs or in the informal sectors. With low income and for economic reason, the rural-urban migrants usually live in the dweller and many of them occupy illegal settlement and without adequate sanitary facilities. The condition has brought the migrants to be prone to any transmitted diseases. Rural-urban migrants usually do not hold any identity card in the destination city as many of them keep working in the village or returning back seasonally. With no identity card in the destination residence, they are not entitled to many benefits and services accorded to most urban dwellers. Only limited research has been conducted on the health care access and health seeking behaviour of this population. This study, based on quantitative data derived from Bandung and Makassar with the total sample of 200 and 400 respectively and combination with qualitative data from in-depth interviews with 30 rural-to-urban migrants found that migrants had limited access to regular medical services. Lack of insurance coverage, high cost, have resulted in use of unsupervised self-treatment or substandard care. Their health seeking behaviour had led to suboptimal health consequences including delayed treatment of illnesses. Findings from this study highlight the importance of reducing institutional barriers to health services and providing affordable health care to this population.

Keywords: Bandung, Makassar, rural-to-urban migrants, health care access, health seeking behaviour, affordable care

17-3

Improving Localized Social Capital and Advancing Migrants' Social Integration in Urban China

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The 2010 census shows there're 260 million migration population in China, while most of them could not have equal treatment as local residents bacause of Hukou system and hukou-based various social institutions. How to advance those migrants' social integration becomes a important issue during China's urbanizaiton process. The exixtent studies have shown social capital takes important role for migrants' migrating from rural area to urban area, and provides migrants great supports for their living and developing in the city. Different with the social capital based on migrants kinship and their village friends, this paper pays attention to those localized social capital shaped and accumulated during their stay in the immigrating cities. The paper constructs a framework of locialized social capital and its impacts to social integration, and meansures localized social capital including local participation, trust with local residens, interactions with local residents. Based on a random sampled survey in coastal area of China, the paper shows localized participation and interactions with local residents have significant impacts to migrants social integration, meanwhile, more interaction also is beneficial to develop mutural trust between migrants and local residentgs, and have positive influence to advance migrants social integration. The paper also suggest related policy implications to advance social capital building in the cities for those migrants, and to suggest a more integrated process of urbanizaiton.

17-4

Deciding to Live Apart from Young Children: Do Remittances Balance Children's Needs?

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Increasing numbers of parents worldwide are making the difficult decision to migrate away from their children to earn income. Rising levels of education, the lack of opportunity in rural areas, and income disparities between rural and urban areas often drive this decision, whether the move is international or internal. Poor living conditions in the destination, along with the time and labor demands of migrant jobs, often prevent parents from taking care of their children in the destination community. Thus while some parents migrate without their children, others may send children who are born in the destination communities to live with extended family elsewhere.

Parents' decision making process to live separately from children, like other migration decisions, may be seen as a cost-benefit analysis. The benefits from supplementing household income must be weighed against the potential detrimental impact of losing parental care. For some families, remittances may be needed to provide basic needs for children and others in the household; for others, the cash earnings remitted to the household may allow children to stay in school longer than they would otherwise, and to have a higher quality of life. The need to pay off debts is also often the critical factor in deciding to migrate.

Concern has been raised in recent years about the well-being of children left behind, including their development, psychological well-being, risk behaviors, educational achievements and health. Results from studies examining these topics from different parts of the world have been mixed; some find that children living separately from their parents have more health and psychological problems than children living with parents, while others find that there are no differences, or even some benefits from living separately.

This paper will investigate the relationship between remittances and children's well-being using a study conducted in two rural areas of Thailand. The study allows comparisons between children living in both parent (non-migrant) households, households where one parent has migrated and households where both parents are living separately. Both older children (aged 13-15) and younger children (aged 8-12) were surveyed, as well as their caretakers. Impact measures include physical health, psychological well-being, health risk behaviors (for older children), and school performance. Factors that can affect well-being include the child's own characteristics, household characteristics including income and wealth, parents' characteristics and migration history, and caretaker's characteristics, including their psychological well-being. The paper will compare migrant and non-migrant households in terms of their income, wealth status and reliance on remittances. It will analyze factors affecting child well-being with particular attention to the trade-offs between household income and parental care, as well as how characteristics of non-parental caretakers may play a role.

18-1

Internal Migration in the Countries of Asia: A Comparative Analysis

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Asia is one of the most remarkable regions in the world for it's population size, density and population movements. Population mobility has increased in scale and complexity, both between and within countries, and rising attention has been given to particular facets of this movement, especially circular mobility and international migration. Movements within individual countries have also been subject to growing scrutiny. To date however, no comprehensive attempt has been made to compare the way in which mobility varies between the countries which make up the region. This paper forms part of the IMAGE project, an international collaborative program of research which aims to develop comparative measures of mobility in 150 countries around the world. In the present paper we examine the types of migration data available in seven Asian countries and employ data from the International Public Use Microdata Series (IPUMS) facility at the University of Minnesota Population Centre to explore cross-national differences. Bell et al (2002) identified four main groups of migration indicators which capture different dimensions of mobility - their overall intensity, migration distance, spatial impacts and redistribution, and migration connectivity - the way migratory flows connect cities and regions. In this paper we focus on two of these, migration intensity and spatial impacts, to identify commonalities and differences in the structure of internal migration in China, Cambodia, Indonesia, Malaysia, Philippines, Thailand and Vietnam. We demonstrate that major variations are to be found between countries, both in the overall level and age profile of mobility, and in its spatial impacts.

Reference: Bell, M., Blake, M., Boyle, P., Duke-Williams, O., Rees, P. & Stillwell, J. & Hugo, G., [2002]: 'Cross-national comparison of internal migration: issues and measures', *Journal of the Royal Statistical Society A*, 165(3): 435-464

18-2 The Growth and Velocity of Urbanization in Asia (Withdrawn)

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18-3

Age Patterns of Internal Migration in Asia: a Cross-National Comparison

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It is well established that age-specific migration rates exhibit enduring regularities across space and time. The propensity to migrate typically peaks at young adult ages, then steadily declines with increasing age, and sometimes rises again around retirement. The age profile is conventionally represented by a composite exponential function comprising a childhood curve, a labour force curve, and in some instances a retirement curve (Rogers and Castro, 1981). Despite persistent regularities, recent comparative research found evidence of substantial cross-national differences in the ages at which migration occurs, especially around the labour force curve (Bell and Muhidin, 2009). That research indicates that migration in Asian countries is strongly concentrated in the early twenties, whereas migration in Latin America and developed countries peaks at older ages and is more widely dispersed across the age spectrum. Those findings were based on comparison of three features of the age profile: the age at which peak migration occurs, migration intensity at the peak, and the breadth of the peak. However, these metrics do not capture other key features of the labour force curve, such as sharpness and asymmetry. This paper proposes two new metrics that are thought to better encapsulate the shape of migration age profiles: the rate of ascent of the labour force curve, defined by the slope of a regression line, and the ratio of the rates of ascent and descent, which measures the degree of asymmetry of the labour force curve. These metrics are applied to an expanded sample of 30 countries. Specifically, we compare the age patterns of internal migration in China, Indonesia, Malaysia, Nepal, the Philippines and Vietnam with those of 24 countries in other regions of the developing and developed world. We compute comparative metrics using census data compiled by Integrated Public Use Microdata Series, Minnesota Population Centre and Regional Statistics offices, and identify commonalities and differences amongst Asian countries and between Asia and other world regions. We then relate the results to key demographic, economic and social country-level indicators and draw conclusions about the link between migration age patterns and human development.

18-4

Urban Transition in India: Evidences from 2011 Census Data

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Though only 31 percent (2011) of the total population in India live in urban areas, in absolute terms, it is one of the highest in the world, only next to China. The size of urban population in India is 377 million, more than the total population of any country in the world except China. During the fifties and sixties of the twentieth century, the country experienced rapid growth of its urban population. During the last few decades, India has experienced rapid urban transition. The country has experienced a noticeable slowing down of the rate of urbanization and urban growth in the past two decades. Against this background, an attempt has been made to analyse the levels, trends and tempo of urbanization in India during the last six decades as well as to project the future urban scenario most likely to be seen in the years to come. The census data on urbanization has been used.The Gini concentration index shows that there has been increase in inequality in the distribution of urban population as more and more population are concentrated in large cities while there has been decline in the growth of small and medium towns. India now holds a very unique urban scenario, a country with swelling urban population but without much urbanization. After peaking at 3.8 percent per annum during 1971-81, the rate of urban population growth has decelerated in the subsequent two decades. The data from the recently conducted 2011 census shows that the level of urbanization in India as well as in many states has increased than the expected level of urbanization. This has reversed the decelerating trend of urbanization witnessed over the previous few decades. This change in level of urbanization has policy implications in terms of development and demand for urban amenities.

19-1

Urbanisation and Rural-Urban Migration in Cambodia

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This paper has also sought to address the question "What are the challenges to the social structure and urban fabric presented by urbanisation in Phnom Penh, Cambodia?" It has been noted that urbanisation presents unique and significant challenges to Phnom Penh. Three decades of war has inhibited both the development of the national economy and the infrastructure of the capital city, which in the main dates from the colonial era. Rapid urbanisation is placing a significant strain on the decaying infrastructure of the city. Moreover, while Cambodia's economy is growing it remains a developing country, unable to provide formal economy jobs and social services to all of its population. Urbanisation is leading to increasing incidences of slums, squatter and informal settlements and associated urban poverty. The data reviewed in this research indicates that there are significant deficits in the city of basic infrastructure and services. Nevertheless the slums, squatter and informal settlements add to the urban housing stock in a city that is unable to provide more formal types of accommodation as demand supersedes supply. In this sense the slums provide housing of a sort to the workers in the informal economy, which it has been argued significantly assist the formal economy in supporting the country's development. This research suggests that there is relationship between slums, squatter and informal settlements, the informal economy and rural-urban migration. That is, migration and urbanisation are reciprocally related processes, which must be considered in relation to each other. In this sense, rural-urban migration is a component of the development process, and does not necessarily have to result in adverse impacts. This research has argued that a multidimensional approach drawing on a dynamic perspective is required to understand the migration-urbanisation relationship as reciprocally related processes. Understanding these processes might enable planners to address the significant social, economic and environmental planning dilemmas of Phnom Penh and cities like it, not least of which is how to improve the existing infrastructure to facilitate a higher quality of life for migrants and established residents alike.

19-2

Urbanization in the Periphery of Ho Chi Minh City: Issues and Solutions

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HCMC is the largest urban agglomeration in Vietnam with a population of over eight million in 2011. The City area is about 2,000 square kilometers, of which 104 km^2 is the inner City; and a large area of about 1,900 km^2 is the periphery. Since 1975, after the liberation, the periphery has changed a lot. It would be divided into two phases: (1) from 1975 -1997 and (2) from 1997 - now on. The establishment of new urban districts (from previous rural districts) in 1997 may be seen as a hallmark of the City's vigorous urbanization. That transfers the periphery into two parts: an area of 600 km^2 has become the outskirts (semi-urban) and more than 1,300 km^2 remains rural. Then, the process of urbanization in the periphery has been taking place in the context of (i) rapid economic development; (ii) important social changes in the City; (iii) a local government which lacks appropriate management measures; and (iv) people's behavior is changing spontaneously in order to adapt to the new situation. Due to the fact of fast urbanization has been happened recently, there are few research works for eveluation of the process of urbanization in the periphery and mainly focused on a single field such as development, population or environment. In our paper, therefore, we focused not only on analysing the urbanization in the periphery but also highlighting the relations between the inner city and the periphery in the context of Ho Chi Minh City, where urbanization is taking place at a very high rate.

This study has two objectives. Firstly it aims to discuss the change of land use, population density, the emergence of industrial zones and the adaptation of inhabitants in terms of socio-cultural practices with the rapid urbanization. Through that, the paper tries to evaluate the process of urbanization in the periphery. Secondly, it tries to explain the main reasons that affect on the process of urbanization in the periphery. Eventhough the local authorities of Ho Chi Minh City have tried to invest infrastuctures, equally, in all new urban districts, some of them are in the right way, others have met a lot of difficulties. The main factors that decide the level of urbanization in each district in the periphery are the development of private sector, especially the estate developers. The population from the inner city move to the periphery and migrants also contributed to the establishment of new slums. The urban planning of the city could not implement totally due the investments of private sector. It also explores the solutions and policies of the city government in facing the challenges of the process of urbanization.

19-3

Internal Migrations, Remittances and Socio-economic Development in Rural China

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The twelfth five-year plan (2011-2015) is testimony to China central government's wish to narrow the city-countryside gap while controlling the country urbanization process[1]. This political choice is in line with the research I carried out in the rural township of Danian in 2010.

In this paper I will firstly show that, despite the existing system of residential registration[2], from 2000, the Chinese central government has for the first time since 1978 changed the direction of its national development policy by multiplying measures to improve rural life and reduce the gap in living conditions between cities and rural areas. Secondly, by focussing my analysis on individual action[3], I will highlight the fact that rural migrations to the cities have economic, social, demographic and cultural impacts on the inhabitants of the countryside. Taking the perspective of the migrant rural workers (*nongmingong*), I study the phenomenon of internal migrations that affects, either directly or indirectly, one in two individuals across the social spectrum. To conclude I will point out that the inhabitants of Danian have been able to make the most of the recent government measures and have often used migratory strategies to achieve their goals and contribute to the socio-economic development of their villages.

My communication will be based on the empirical study I carried out in the municipality of Danian, north of the Guangxi province, in 2010. I interviewed 34 individuals from two ethnic groups (Miao and Dong), of both sexes and in different age groups, using a semi-directive interview method. These interviews have been supplemented with observations of, and informal discussions with, the population. This enabled to obtain more unguarded or spontaneous replies that those I received during the recorded interviews. I analyzed and supplemented the contents of the collected information with statistical data provided by the Danian municipality on the economic situation of the township and its demographic structure.

According to my findings, in the township of Danian where more than 20% of the population of the villages migrate towards cities and more than 80% of the migrants are aged between 16 and 39, internal migrations happen to have a strong impact on family structures, distribution of roles and social dynamics in villages.

[1]shehui lan pi shu : 2011 nian. Zhongguo shehui xingshi fenxi yu yuce, Blue book of China's society : year 2011. Society of China analysis and forecast, Social sciences academic press, China, p.1-15, p. 208-217 et p. 261-271.
[2]*Huji zhidu*, more commonly referred to as *hukou*.
[3]For further reading on the "capability approach", see Sen. Amartya, "Poor, relatively speaking", in Oxford Economic Papers, 35 (1983), p. 164.

19-4

Agricultural Change and Migration in a Rural Agrarian Setting

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This study investigates the impact of the use of labor-saving modern farm technology use on individual out-migration. Almost all rural agrarian societies around the world have been undergoing remarkable changes in the ways in which farms are operated. New technological innovations (such as high-yielding crop varieties, improved animal breeds, chemical fertilizers, pesticides, and mechanization) and the development of new markets have dramatically changed the agricultural sector. Traditional family-based farming systems are rapidly experiencing greater commercialization; rural subsistence agriculture is shifting towards market-based agriculture, and rural farm households are increasingly reliant on modern farm technologies to increase per-unit area production. At the same time, an increasing number of individuals from agricultural households in developing countries are engaged in migration. Nepal, the setting for this investigation, is no exception to experience both of these dramatic changes - agricultural transformations and migration of labor out of agriculture.

Empirical evidences suggest that the use of modern farm technologies can result in the substitution of labor, and therefore, use of such technologies by farmers in crop production may replace human labor. According to Massey et al. (1998), the replaced human labor creates a mobile labor force, which is prone to migrate. Although a number of explanations exist as to why people migrate, little is known about the influence of such agrarian transformations on individual migration. This study investigates: *To what extent does the use of labor-saving modern farm technologies influence individual out-migration, controlling for all other important factors*?

The panel data from the Chitwan Valley Family Study offers a unique opportunity to answer this question while simultaneously controlling for other social and economic factors known to influence migration. We follow individuals within each household month-by-month for 126 months beginning in February 1997 and each month regress the 0-1 migration outcome on independent variables.
Using the discrete time event history methods to model the monthly hazard of out-migration by particular individual, with person-months serving as the unit of analysis, our findings suggest that while other farm implements and chemicals did not have a large effect, the use of a tractor significantly predicts subsequent out-migration.

This research provides important insights in the existing literature both theoretically and practically. Theoretically, we examine the effect of a new group of factors—labor-saving farm technologies—on rural out-migration. Practically, this research will have substantial relevance for understanding these relationships in other parts of the world, where living conditions are similar to those to this setting such as in India, Pakistan, and Bangladesh and other countries of South Asia.

19-5

Retirement Migration Rate and Pattern: An Indonesian Case

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Studies have shown that migration of Indonesians has become more complex. Many Indonesians envision the ideal retirement of making a move to a small, slow-paced town. Some anecdotal evidences have been observed. Yet, retirement migration is still understudied despite recent accelerated growth of the proportion of population aged 60 and above. The retirement migration should be anticipated when facing an emerging ageing population in the coming decades. This paper aims to explore the 2000 Indonesia's population census to provide estimates of the number, rate and path of the migration of older persons, building a foundation to understand the deeper implications and opportunities of retirement migration for family, community, province and the state. Adopted from Longino and Bradley (2003), retirement migration is defined as population aged 60 and above at the time of the census who had lived in a different province 5 years earlier. The paper finds that the total estimated number of elderly inter-provincial migrants was relatively small against the total Indonesia's population, only 154,786 persons, during the 1995-2000. This number accounted for 3.4% of 4.6 million working-aged migrants. The elderly migration rate is smaller than that of the younger population. This paper further examines the path of retirement migration indicating comparing the quality of life in origin and destination, a factor that may attract or push retirees to move in and out. Out of 30 provinces in 2000, 17 provinces had positive net elderly migrants with West Java and Banten, the neighbouring provinces of the capital receiving the most elderly migrants, while 13 provinces had negative net elderly migrants with Central Java and Jakarta, the capital of Indonesia, as the major sending provinces. The findings shed light on spatial patterns of retirement migration which may affect provisions of services, technology and economic development going forward. Retirement migration may indicate the needs to reunite with their extended family after working life, to tighten intergenerational relation, to seek caregivers and to live a more slow-paced provincial life.

20-1

Internal Migration Consequences and Its Changes

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The migration was under strict control before 1990 in the social period in Mongolia. Since 1992, New Constitution of Mongolia declared the "freedom of movement" within the borders of Mongolian; this and other reasons such as socio-economic structural changes and differences in regional development increased the in-migration. Rural-urban disparities have deepened, significantly contributing to internal migration and emigration of the population. Many people and families have moved from rural areas to cities and from cities to abroad in search of better opportunities, education and better-paid jobs. Although internal migration has eased social pressure in rural areas, it has been accompanied by some adverse consequences including a shortage of qualified staff in rural areas, increased social burdens on cities and deterioration in the quality of and access to social services. Most of the movement is towards the capital city of Ulaanbaatar, with one-third of the inhabitants of the city being in-migrants. In total, 63.3 per cent of Mongolians now live in urban areas, with two-thirds of these living in Ulaanbaatar, which continues to increase its share of the urban population and leading to the "urbanization of poverty" in Mongolia. In-migration has a huge on poverty and environmental problem in Ulaanbaatar. Migrants are poorer than non-migrants in terms of the consumption expenditure, access to services and their social inclusion.

This paper aims to determine the migration flow, migration causes, access of migrants to basic social services, problems faced by migrants, strategies of overcome hard time, effect made by migrants on destination areas. The study analysis is used data from internal migration surveys which were conducted by Population Teaching and Research Center in 2000 and 2009. The key results are compared to the main causes for migration to Ulaanbaatar and problems faced by migrants.

The findings indicates that in comparison to in 2000 ‘to get closer to the market" stopped being a leading cause for migration, but an aim to access benefits of development, to seek opportunities, to get closer to development the main causes of migration in recent time. However, majority of migrants are not educated, and do not have qualifications, it is difficult for them to find job, so they have to take the most difficult, the most low-paid jobs.

There is lack of policy activities directed towards coordination, management, prevention of internal migration, assistance to and support of migrants, via regional or regionalized development in direct way, a policy frame of regionalized development policy to support balanced development of regions, to reduce the migration flow, decrease overconcentration, and reduce negative consequences of migration.

20-2

The Pattern of Household Receiving Remittance in KDSS, Thailand

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As in many other developing countries, remittance from internal migration is key factor of sources of income for migrant households at origin. In Thailand a large number of working age population migrate from low income destination to high income destinations, mostly from rural to semi-urban or urban areas for economic reasons. Previous research has focused on remittances in relation to macro and micro level benefits. There are lack of evidence found in Thailand on the pattern of household receiving remittances and how its covariates vary over the time. Therefore, the main objective of this paper is to examine the pattern of remittance received by household at origin and how such patterns change over time by employing longitudinal data from Kanchanaburi Demographic Surveillance System (KDSS), Thailand. The sample size for this study is 1,078 households that have at least one out-migrant who reported his/her migration details. We employ panel data analysis to predict the pattern of receiving remittances. Outcome variable is measured by both amount and frequency of remittances received by household during last 47 months between round 2(2001) and round 5(2004). The outcome variable is predicted by using covariates (independent variables) such as migrant' characteristics, household level characteristics, duration of migration, and community level characteristics. We employed multi-level regression analysis. The basic-result found that the average remittance monthly received by migrant's households is shown by the following graph.

20-3

How Things has Changed during the Last Decade? An Investigation of Women's Migration in Urban India

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Migration of women within and from developing regions affects the development process itself for those regions. Available literature shows that women's migration has been increasing in India and considered as a post-nuptial migration. Despite the rising number of female migrants, women are not given equal importance as compared to men in migration, since they are still not perceived equal actors worthy of being accounted for. More significantly, women are migrating because there is an increasing educational level among them who do not like to be confined to household chores. So Present paper attempts to study the changes in migration scenario in two time periods and also to examine the various socio-economic factors influencing female migration in urban India, using the 55^{th} (1999-2000) and 64^{th} (2007-08) round of Indian National Sample Survey data. The study uses customized cross tabulations of relevant variables from National Sample Survey data, Government of India, which are converted to unit level records through STATA software. Logistic regression was used to know the other socio-economic, demographic and geographical factors affecting women migration. Analysis suggests that long term migration among women is increasing in urban India. A macro overview reflects that marriage is not only the most critical factor influencing women migration but work status, social status, and educational status has also played the significant role in migratory process. In urban areas, the pull factors are playing a predominant role in the process of migration. With increasing MPCE (monthly per capita consumption and expenditure) level, the probability of migration among women is increasing (excluding marriage as a reason for migration).Illiterate women are more likely to migrate. A significant proportion of female migrants engage themselves in urban economic activity. Therefore, it can be concluded that globalization and urbanism has facilitated the process of migration and urbanization.

20-4

Internal Migration and Urbanization: Opportunities and Vulnerability of Female Adolescents Through the Lens of the 2009 Viet Nam Census

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Census data from Viet Nam provides a formidable database to investigate the consequences of mobility behavior on young women's living conditions while presenting a challenge to identify ways to develop indicators of vulnerability.

Our study focuses on the 1.3 million girls aged 10-19 years from the 15% Vietnam census sample, which comprises 14.2 million individual observations. To document the influence of migration and urbanization on vulnerability of female adolescents, we have use statistical tools such as relative risks, logistic regression model, correlation coefficient and principal component analysis. We have also used spatial analysis through mapping.

The results show that mobility rates are very low for girls aged 10. They sharply increase at age 15 and reach a peak among women aged 20 with higher levels in urban areas. Migration is linked to transition to adulthood, which happens earlier for migrants than for non migrants, with differences according to the type of migration.

Vulnerability indicators have been classified in three broad categories: health, social and socioeconomic variables. Their regional distribution is extremely uneven, which demonstrates the multidimensional aspects of vulnerability and the very distinct concerned populations. Women living in urban areas are more vulnerable regarding mainly their household membership, economic activity and level of life whereas those living in rural areas more often belong to an ethnic minority, are illiterate and have experienced early family events. Migrants are more vulnerable regarding indicators dealing with their place in the household, their level of life and their family situation whereas non migrants are more vulnerable regarding their economic activity, ethnic membership and education. The influence of migration differs according to its scale. The relative roles of migration and urbanization in the determination of the level of each vulnerability indicator show a strong impact of migration. The analysis of the clustering of vulnerability indicators at the district level leads to the identification of two broad sets which relate respectively to reproductive health and to urban marginality. Interestingly, provinces tend to cluster both by spatial proximity and by socioeconomic profile, from mountainous minority-dominated areas to agricultural plains and urban agglomerations. Our analysis emphasizes some lesser-known dimensions of social vulnerability, related in particular to the situation of adolescents in their household and to their economic circumstances. It confirms the highly heterogeneous nature of Viet Nam's young female population in 2009. It also shows how migration processes result in a radical change in vulnerability conditions and how the social and economic situation of women evolve within a short segment of life, especially between 13 and 20 years.

21-1

Estimation of Adult Mortality in Some Selected States of India: An Application of Variable-R Approach

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Estimation of adult mortality in less developed countries are often challenged by difficulties in data collection, Incomplete vital registration, inaccurate censuses, and age misreporting in both death and population reporting (Mari Bhat,1990; United Nations, 1983). Nevertheless, it is increasingly important to understand adult mortality better in order to respond to emerging issues regarding rapid population aging in the developing world. In this paper an attempt has been made to estimate intercensal adult mortality of some selected Indian states during 1991-2001, through a procedure proposed by Lahiri and Menezes (2004) under Variable-r approach. The technique adopted here makes use of a formula developed by Lahiri(2004) in estimating the ratio (T_x / T_{x+5}) from two census enumeration, not necessarily the intercensal interval being multiple of 5, of any closed population following the generalized population model proposed by Preston and Coale(1982).This method adopted here neither requires the conventional assumption of equality between census survival ratios and corresponding life table survival ratios nor requires to project the census the first census age-data under different mortality levels of a selected modal mortality pattern up to the time of second census. This method has been successfully applied on Swedish and Korean data. Here this method has been applied for selected Indian states census age-returns after making necessary adjustment pertaining to migration. Selection of states (Himachal Pradesh & West Bengal) has been done on the basis of their net migration rate during 1991-2001.An attempt has also been made to estimate survival probabilities at ages Beyond 5 by iteration procedure given by Lahiri (2006), from a set of cumulative Life Table Survival Ratios (T_{x+5} / T_x) for selected Indian states after smoothing the 5-year cum-survival ratios by Brass-type two parameter logit model. By virtue of survival probabilities, Life tables (beyond age 5) have also been constructed for selected Indian states. An attempt has also been made to construct Adult mortality tables for some districts of one of the selected states. Furthermore technique adopted that makes a direct use of cumulated age-data has certain advantages in controlling the errors in age reporting over various methods in estimating intercensal adult mortality .The main difficulty of the technique proposed here is the lack of regarding the true nature of growth curve. However it is found that the assumption that the assumption of the second degree growth curve works well in general in the age-span 45 and above. For identifying suitable model mortality pattern applicable to Indian states during 1991-2001 the model presented by Coale and Demeny (1983) systems were utilized. It has been observed by detailed analysis that method produces very good result provided it is applied on age-data that is less affected by Migration factor

21-2

Evaluation of Completeness and Data Quality of Mortality Information Systems in Iran

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Measures of mortality, such as age-specific death rates, life expectancy, cause-specific death rates and years of life lost (YLLs) are commonly used to measure the health status of a population The broad goal of this study was to critically evaluate Iranian mortality data now becoming available for the entire population and, using the Burden of Disease Framework, develop estimates of age-sex-cause-specific mortality rates in Iran, and derive summary measures of mortality from these estimates.

A systematic review of all available studies on infant mortality in Iran was carried out and the most probable trend in child mortality over the period 1964-2004 was estimated. Death registration data were assessed for completeness to estimate the level of adult mortality. Life tables were constructed for Iran based on these data, corrected for underegistration of deaths. To estimate provincial differences in levels of mortality, data from the death registration system (MOH&ME) for each province were separately evaluated for data completeness and life tables were constructed for provinces after correction for under-enumeration of death registration using the Brass Growth Balance method. To assess the extent and patterns of misclassification of causes of death, a fieldwork study involving detailed medical records for 1,426 hospital deaths classified to seven ill-defined or vague causes of death in the death registration system were reviewed by trained physicians. Leading causes of premature death in Iran were then estimated on the basis of corrected values of Years of Life Lost (YLLs) by major causes.

Infant mortality decreased from an estimated 154 deaths per 1000 live births in 1964 to 26 in 2004. The risk of adult mortality between 15 to 60 years ($_{45}q_{15}$) in 2004 was estimated to be 0.124 and 0.175 for females and males, respectively. Life expectancy at birth in 2004 was estimated at 71.2 years for females and 68.7 for males. Important provincial differentials in mortality exist in Iran. Child mortality ($_5q_0$) in 2004 varied between provinces. For adults, provincial differences in mortality were significantly greater for males than females. Life expectancy at birth for females was highest in Tehran province (73.8 years) and lowest in Sistan and Baluchistan (70.9 years). The probable underlying pattern of causes of death in Iran is substantially different to that suggested by the death registration system. After adjustment, ischaemic heart disease is estimated to be the leading cause of death in Iran.

While the completeness of the newly-launched death registration system operated by the Iranian MOH&ME appears to be acceptable in the majority of provinces, further efforts are needed to improve the quality of data on mortality in Iran.

21-3

Rational and Evidence Based Correction of Population Census Based Indirect Estimates of Infant and Child Mortality Rates: Application to the 2010 Indonesia Population Census

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The inadequate vital registration systems in many developing countries (including Indonesia) forces analysts to indirectly estimate infant and child mortality statistics from population surveys or censuses, relying on reports of child survivorship for mothers of different age groups. These estimates commonly suffer from uncertainties related to uncertainties of data quality and the questionable validity of different estimation methods. Indonesian rates of infant and child mortality by sex and province have recently been estimated using data from the 2010 Population Census. However, evidence clearly indicates that these estimates are well below the levels found in contemporaneous surveys.

The objective is to show rational and evidence based correction of population census based indirect estimates of infant and child mortality.

Conceptually, the correction considers both quality of the data used for estimating levels of under reporting of child dead and validity of the indirect estimation method for estimating levels of under-estimation of child death rates. The population census based indirect estimates of infant and child mortality are compared to the survey based indirect estimates of comparable sites and time references to partly evaluate levels of under reporting of child dead. Indirect estimation method and life table models are also employed to evaluate consistencies of proportion of children reported as dead according to different age groups of mothers. Relevant evidence has been gathered to assess the underlying assumptions in the Brass-Trussell estimation methods. Census based indirect estimates of infant and child mortality are corrected by province for under reporting of the proportion of children dead by age of mother and for the tendency of the indirect estimation method to use parameters that produce underestimates of death rates.

Corrected estimates of infant and child mortality rates by sex and province are higher than the uncorrected estimates. The level of correction of the estimates varies by province. The analysis showed that the data were more important than the estimation method in producing accurate estimates.

21-4

Increasing Life Expectancy and Convergence in Age at Death in India

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There has been a significant increase in the life expectancy at birth (e0) in India thereby enhancing the chances of the people to live up to very old ages besides indication of overall improvement in mortality levels in the country. However, improvement in mortality also leads to concentration of deaths in narrow age range and understanding of dispersion measures of death sensitive to changes in life expectancy has public health relevance. Patterns of diversity in age at death can be examined using a dispersion measure (e+) which the average expected lifetime is lost at death. The value of e+ quantifies the average life expectancy losses attributable to death. Although the various dispersion measures are highly correlated, they differ somewhat in their sensitivity to deaths at different ages in the lifespan distribution. This measure covers the entire range of ages and has an important public health interpretation. The objective of this study is to relate the changes in diversity in age at death with changing life expectancy in India. The main input is the age specific probabilities of dying from the Sample Registration System abridged life tables of India from the period 1971-75 through 2001-05. The Hellingman Pollard equation is used to estimate the single year age specific probabilities of dying from five year age specific probabilities using Mortpak Software. These single year age specific probabilities are the subsequent input for estimation of life expectancy at birth (e0) and e+ for males and females in India. The results shows that the life expectancy at birth among males has increased by almost 11.6 years during this time period and the decline in life expectancy lost due to death is 5.1 years. The increase in life expectancy at birth has been more rapid among females by almost 14.6 years but decline in life expectancy lost due to death is 5.3 years slightly higher than males. Over the years, with the increase in life expectancy at birth, the life expectancy losses due to death have declined showing convergence in the age at death in India. The strong negative association between e0 and e+ ($r = -.9976$ and $r = -.9937$ for males and females, respectively) has been observed. However as we go down towards the higher ages, the pace of decline in the life expectancy losses is not that rapid with respect to corresponding increase in life expectancy. The lower life expectancy losses are, the greater is the rate of progress needed to achieve an additional year of life expectancy.

21-5

Rate of Ageing of the Chinese Oldest-old and its Determinants

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This study uses a longitudinal data from the Chinese Longitudinal Healthy Longevity Survey (CLHLS), which involves five waves of surveys, one intake survey in 1998 and four follow-ups surveys in 2000, 2002, 2005, and 2008, to examine the rate of ageing of Chinese elderly and its determinants and selects the 4831 individuals who experienced two and more survey from the 9093 elderlies who are fully interviewed in baseline survey and partially participated in next four follow-up surveys.

The strength of this work is that the rate of ageing is calculated based on the individual level. This research employs a cumulative index (frailty index) to measure the ageing of the Chinese oldest-old and estimate the rate of ageing by calculating the change of frailty index over time. The key finding of this study is that the density distribution of rate of ageing looks like a cone with high proportion of samples converging the mean rate of ageing while the mean rates of ageing for the elderly at different ages are nearly the same, almost 2-2.5% per year.

The regression results show that all of the regression models of both early and present variables can explain at most 16% of the change of individual rate of ageing, which indirectly means that both the early experience and present status are not the main determinants of individual rate of ageing. Moreover, *doing regular exercise both in early life and in present life, the adequacy of medical service if seriously ill and sufficiency of financial support for daily costs* are helpful for the elderly to slow the rate of ageing, while most postulated determinants of rate of ageing are not tested statistically significantly in this study, including the *birth place, current residcence, marriage times, availability of medical service both at around age 60 and in childhood, and experience of hunger in childhood*.

22-1

Determinants of Blood Pressure Control in Hypertensive Diabetic Patients in Rajshahi District of Bangladesh

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The main objective of the study is to examine the determinants of High Blood Pressure Control among Hypertensive Diabetic Patients in Rajshahi district of Bangladesh. Four hundred and six hypertensive diabetic patients (254 male and 152 female) were interviewed through a structured questionnaire from the Rajshahi Medical College Hospital and Rajshahi Diabetic Center who were receiving medication for hypertension (HTN) and diabetes. Bivariate and multivariate statistical techniques, such as, chi-square test and logistic regression analysis were used to evaluate the effect of a select group of variables on the probability of controlling HTN. Among 406 respondents, 259 or 63.8% of the respondents can control HTN while 147 or 36.2% cannot control HTN. Among the patients who can controlled HTN almost 63% are males and 37.0% are females. The results of the test and the regression analysis show that the variables selected for the analysis are generally important predictors of HTN control among the diabetic patients. The prevalence of hypertensive diabetic is increasing rapidly in Bangladesh. It is a chronic disease which can be controlled by regular physical exercise, taking medicine on a regular basis and reducing occupational and mental stress. Educating patients about the effect of the disease will help to control HTN.

22-2

Trends in Mortality by Causes of Death for Working Ages in Central Asia

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Trends in mortality in Central Asia have repeatedly changed under the influence of economic and political transformations over the past century. These changes do not fit into the framework of the theory of epidemiological transition. The last "step back" occurred in 1990th after the Soviet Union collapse. Life expectancy decreased by several years in all the new states. However, in the 2000th mortality in the Central Asian republics has gradually began to decrease, approaching the best indicators of the Soviet period; never-the-less, speaking about overcoming of the mortality crisis is too early. For the better understanding the roots of current problems in the field of mortality it is necessary to restore the trends over a longer time period. The statistical information provides for a full analysis of mortality rates starting from the 1960s. In the 1990s, the quality of registration of the deceased declined. The reliability of recording the causes of deaths deteriorated. For example, while in 1989 in Kyrgyzstan almost 25 per cent of causes of all deaths were established by autopsy, in 1995 this number went down to 15 per cent. Only in the 2000s the situation has started to improve.

This paper presents the results of a comparative study of mortality by cause the Central Asian states in Kazakhstan, Kyrgyzstan, Uzbekistan, Tajikistan and Turkmenistan since 1960. We have investigated the cause of death in people between the ages of 15 and 60. This age group was chosen as the object of study for two reasons. First, as it is known, the high mortality of population in working age distinguishes the "Soviet model" of mortality. What causes of death give grounds for the model in Central Asia? To what extent in recent years did the republics manage to move away from this model? Secondly, the quality of registration of deaths in working age is much more comparable to the other age groups.

Analysis of the dynamics of mortality level for selected causes of death was carried out by means of standardized mortality rates. Especially the contribution to the general mortality level of such causes of death, as tuberculosis, liver cirrhosis, coronary heart disease, poisoning, homicide and suicide were also studied. Specific changes in age patterns of mortality by main causes of death were evaluated by the census dates. The paper also deals with the question of the impact of changes in the ethnic composition on the level and structure of causes of death. After the collapse of the USSR a large part of European-origin population has left Central Asia. This population differed from the indigenous by its socio-demographic and behavioral characteristics, and as a consequence, by the age patterns of mortality and causes of death.

22-3

The Changing Pattern of Cardiovascular Diseases in India

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Though the cardiovascular diseases (CVDs) are the leading cause of mortality and morbidity in India, little is known on the pattern of the disease by social and economic attributes over time. Like many transitional economies, the CVDs are increasingly affecting the working population that has adverse social and economic implications to individuals, households and the economy.

The broad objective of this paper is to examine the morbidity pattern, estimate deaths and understand socio-economic differentials in hospitalisation due to cardiovascular disease over time.

Data for the present study has been drawn from 52nd (25) and 60th (25) rounds of National Sample Survey (NSS), India, conducted during 1995-96 and 2004 respectively; and the Causes of death in India 2001-03. The two rounds of NSS were designed to provide comprehensive and comparable information on nature of ailments, status of ailment, type of provider, and cost of treatment etc from those who sought treatment either as inpatient or out-patient in a reference period. Data of two time period are also pooled to understand the effect of time on disease pattern. Bi-variate and multivariate analyses are used to understand the socio-economic differentials and the significant predictors of hospitalisation.

The estimated number of deaths due to CVDs in India was about 1.6 million in 2002 and it is likely to be a minimum of 1.8 million by 2020. During 1995-2004, the morbidity rate due to CVDs has increased from 1.9 to 7.8 per 1000. The hospitalisation due to CVDs has also increased across age group, educational level and economic class. While the hospitalisation for heart disease was significantly higher among economically better off and educated it was not so for hypertension. Results of multivariate analyses suggest that age, education and occupation are significant predictors of hospitalisation for both heart disease and hypertension.

The cardiovascular diseases is advancing towards the young population and affecting both rich and the poor and educated and uneducated. Though the public spending on health care in India has increased in last decade little is spent on non-communicable diseases. Thus there is an urgent need to mobilise resources for the prevention, control and treatment of cardiovascular diseases to protect families, household and the economy from disaster.

22-4

Cancer Mortality Patterns in Pacific Islander Populations: A Comparative Analysis of American Samoa, Guam, Hawai'i, and Saipan

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Asian and Pacific Islander (A/PI) populations experience a heavy disease burden of cancer. To understand better the patterns of mortality due to malignant neoplasm in these populations, we will exploit an underutilized database. Population-level differentials and trends of cancer mortality have not before been studied for the polities in question, in the way we propose.

The multiple cause of death data files are electronic records of every death in the United States. Starting with 1997 (year of occurrence), all United States outlying territories have been included; the data run through 2007 ('08 data will probably become available in August '11). This database, in general, and the outlying territory data in particular, are under-utilized. We will analyze data from all the US Pacific island states and territories: American Samoa, Guam, the Commonwealth of the Northern Mariana Islands (hereinafter, Saipan), and Hawai'i. Several other geographic entities will also be studied: California (as an example of an ethnically-diverse mainland state, as a further comparison); and the other states (as a comparison to CA & Hawai'i). For Hawai'i and California, we can separate A/PI deaths. Furthermore, not related to A/PI, but to control for "island effects", we will look at: the US Virgin Islands (USVI); Puerto Rico; and Hispanics in Florida (as a state-comparison for those polities). The numbers of deaths in Guam, Saipan, and AS are small. Therefore, as has been done of other cancer studies in small populations, we will look at proportional mortality, not rates. We will examine cancer as a proportion of all deaths, and different neoplasms within the cancer category. Even so, we will pool to 5-year periods to beef-up the sample size (1997–2001; 2002–06). This will also allow us to cross-validate the findings, by looking at stability across the two time periods. We will probably do age-standardization as well, since the populations may have quite different age structures. We will stratify by sex.

Some basic questions are: (1) are A/PI populations similar in their cancer mortality patterns? (2) if so, how do they compare to the non-A/PI population of the United States? (3) If differences, not similarities, predominate, are the patterns stable over time?, and, (4) are there differences of similar magnitude for Puerto Rico & USVI compared to the mainland?

It remains to be seen whether there will be differences but it seems to us to be potentially interesting either way. A common pattern of A/PI cancer morality in such diverse settings would be interesting, while different patterns would be more difficult to interpret but would still provide some useful comparative epidemiology. If California A/PI patterns are divergent from Pacific A/PI patterns, then are they similar to the patterns seen in non-A/PI Californians, or are they another pattern?

22-5

Adult Mortality in the Asian Part of the Former USSR: Similarity and Disparity of Epidemiological Profiles in Armenia, Georgia and Kyrgyzstan

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The former USSR region has been experiencing a major health crisis. In Russia - the largest and most studied former Soviet republic - unfavorable mortality trends have been observed for several decades, and these trends have been attributed to a large extent to high consumption of strong alcoholic beverages. In this presentation, we focus on adult mortality trends in three countries located in the Asian part of the former USSR: Armenia and Georgia in the Caucasus, and Kyrgyzstan in Central Asia. We examine similarities and differences in the epidemiological profiles of these three countries. We find that mortality attributable to alcohol contributes to a great extent to adult mortality levels in these countries. However, we also find that levels and trends vary greatly from one country to another. These differences may be explained by differences in the proportion of the population that is Slavic, but also by cultural differences among native populations in the production and consumption of alcoholic beverages.

23-1

Pattern of Mortality Changes in Kerala: Are They Moving to the Advance Stage?

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Drastic level decline of mortality and high advancement in life expectancy has experienced Kerala during the last century even with less per capita income with low nutritional status. This achievement in health indicators was even comparable with developed countries. However, most of the developed countries have achieved an advanced stage of mortality reduction from adults and early old ages to the advanced ages in the recent decades namely ‘delayed degenerative stage of epidemiological transition'. This paper examines the possibility of this advanced stage of mortality reduction in Kerala by using the methodology given by Olshansky and Ault (1986) mainly from census and SRS data in a historical perspective. It was found that overall mortality was drastically declined in the state to the recent decades. Younger ages have contributed almost their maximum for this reduction. Therefore, the possible further mortality reduction is concentrated on adult and early old ages recent period. But, the contribution of these ages were lower than the youngsters to the life expectancy up to 1991-00, but became highest in the recent decade which indicate beginning of advance stage of mortality decline in the state. However, these changes are lower in males than females because of their lower reduction in adult mortality. The paper concludes that the healthcare policies in Kerala is sufficient to address the health issues of infants, children and mothers in reproductive ages, it also should make necessary policy attention to the health problems of adults especially to the males.

23-2

Decelerating Mortality Rates in Older Ages and its Prospects Through Lee-Carter Approach

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The present study attempts to study the mortality pattern and prospects through Lee-Carter approach. The objectives of the study are to examine the trend of mortality decline and life expectancy. Contemporaneously, we have projected life expectancy up to 2025, projecting ASDR through Lee-Carter method. Life table aging rate (LAR) has been used to estimate the rate of mortality deceleration. Overtime, LAR has increased and in recent decade it has remain more or less unchanged. By age, LAR has shown significant increase in the oldest of old. The slope is steepest in the oldest of old in the recent decade. The rates of mortality increases in oldest of old as the age group is more vulnerable to chronic disease and vulnerable to identifiable risk factors for virtually every disease, marked by senility. The analysis revealed that the level of mortality is not declining but rate of acceleration is declining and is further expected to decline. The Pattern of mortality has transformed from U-shape to J-shape manifesting the decline in premature mortality. By the year 2025, the age specific death rates for the age group 5-9 and 10-14 will go below one per thousand .Life expectancy will attained as high as 73 and 79 years for male and female and is further expected to increase linearly. 71 percent of total female birth and 57 percent of total male birth will survive up to age 70+. Also the findings revealed that mortality rate is declining with constant rate up to age 70 and thereafter, the mortality rate accelerates and this holds true for both sexes.

23-3

Implications of Age Structural Transition on Health Care Expenditure in India

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Financing health is one of the critical determinants of health outcomes. Higher prevalence of morbidity among elderly causes elevated health expenditure which turns into more requirement of money under the assumption that the elderly are treated equally to younger. With the age structural transition and longevity improvements, the old aged population is expected to grow from 6.7 (2001) to 19.1 percent by 2050 in India. This needs a simultaneous future growth of Government and Private health expenditure. Therefore, the present research attempts to analyze per capita health expenditure (PCHE) by age group using 60th round of the National Sample Survey (NSSO, 2004). PCHE by five year broad age groups have been calculated for the different health components such as, in-patients, out-patients, maternal and child health (antenatal, institutional delivery, postnatal and immunization), family planning as given in the National Health Account (NHA, 2004) framework.

Health spending as percentage of GDP is quite low in India, but showing an increasing trend. The PCHE has increased from Rs 178 to Rs 493 in public and Rs 592 to Rs 1181 in private source during 2000-2008. The percentage of GDP health spending has rose from 3.5 in 2000-01 to 4.8 percent in 2008-09. Public health spending as percentage of GDP has boosted up relatively faster than private source. A study by age profile clearly shows more health expenditure in older ages unveiling positive association of age and poor health status. Since India's population is large in younger ages therefore, total health expenditure is found higher among young ages and slightly lowers down with the age advancement. It is clearly evident that, ageing of the population will encourage increased growth on future health spending. Ageing adjustment to Health spending was 0.59 in 2005 which will increase to 0.87 in 2024 and afterwards is expected to be stagnant. Further, this adjustment will receive a high growth during 2019-2024. PCHE is expected to increase by more than ten folds during 2004-2025 and again twenty folds during 2025-2050. However, GDP per capita is likely to increase in five folds from 2004-2025 and by five folds from 2025-2050. Share of health expenditure in GDP is projected to increase by more than two folds from 4.1 percent in 2004 to 9.6 percent in 2025 and again more than three folds from 2025 to 32.5 percent in 2050. The states with higher longevity are showing higher contribution of health expenditure, Punjab and Kerala are emerging with the highest growth of health spending. At last, study concludes the aging of population will contribute more on health spending in future with varying levels by states.

23-4

Socio-economic Inequalities in the Occurrence of Disability in India: Evidence from a Large Scale Sample Survey

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Inequalities in disabilities reflect and reinforce inequalities in other domains and these inequalities together act as a brake on economic growth and development. As there is no direct mortality associated with the various types of disabilities, they remain at the bottom of the government's priority list. There is no mention of ,disability either in the constitution of India or the millennium development goals (MDG), thus the treatment and prevention of disability does not demand much attention. So the studies related to disability in India are very limited and most of them are focused only to older age population. Moreover, none of the studies used the inequality measures to understand the inequality in occurrence of these disabilities.

We use data from India Human Development Survey (IHDS) conducted in 2004-05 to test the hypotheses: Occurrence of different kinds of disabilities is not associated with economic condition of the population.

The present study had measured four outcome variables namely occurrence of locomotors disability, visual impairment, hearing impairment and speech disability. Person who were unable to perform their chores or performed with difficulty were taken as disable.

Bivariate analyses rich-poor ratio, Concentration curves, adjusted concentration indices, dominance test were used to understand economic inequality. Binary logistic regression models and Wald test were also used.

Concentration curve provides a complete picture that how disability varies across the full distribution of living standards. A concentration index is a measure of socioeconomic inequality and is defined as twice the area between concentration curve and diagonal, and it varies between -1 to 1. The closer the value to 1 (absolute), the distribution of disability is more unequal and the closer the value to 0, more equal is the distribution of disability.

Findings of the study reject our hypothesis "occurrence of different kinds of disabilities is not associated with economic condition of the population". Findings suggest huge socio-economic inequalities in the occurrence of different kinds of disability. Poorer sections of the society have the disproportionately higher prevalence of all types of disability. A better understanding of the health condition in terms of disability across the different economic group will enable the government to plan and implement health programmes in a proper way so that they reach the needy and poor.

23-5

Socio-Demographic Differential in Nutrition Diet Patterns in Iran 2010

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Studying interplays between Socio-Demographic structures, food and nutrition has been a very essential part of demographic research. This study attempt to provide an understanding of the food consumption and nutritional patterns in Iran with respect to Socio-Demographic variables. The analyses are based on primary data from Household Earning and Income survey conducted by SCI[1] in 2010. In past tow decades investigating the interlay between population and nutrition has led to emergence on the "Nutrition Transition Theory". Increased consumption of unhealthy foods compounded with increased prevalence of overweight in middle-to-low-income countries is typically referred to as the “Nutrition Transition.” It occurs in conjunction to the Epidemiological Transition. Most evidences indicate that Iran confronts with diet rich in fat and sugar and its proceeding health problem. National Nutrition and Technology Research Institute in Iran decelerated that Food consumption pattern in Iran indicate that % 20 of people faced with the energy deficient, about 40 to 50 percent were deficient in calcium and vitamins A and B2 while about %40 of Iranian Households get over %120 required energy. During a decade (1985-1995) two types of development in urban and rural household food diet had been created. The first were changing in quantity of nitration diet and second was displacement between food baskets.

The socio-demographic patterns of food consumption and nutrition within households, as revealed in this study, may facilitate policymakers' efforts In identifying the appropriate targeting mechanisms for interventions.

Generally speaking, results are indicate that food and nutrition diet patterns are different by household Socio-Demographic characteristics such as family and structure, type of residence, household with retiree person, household's income, head of household's education, employment status.

Keywords: Nutrition diet pattern , food consumption ,Nutrition Transition, Socio-Demographic variable.

24-1

What Determines the Choices of Health Care among Tuberculosis Patients?

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An individual is rational about making his/her health care choices and it has direct implications on their health condition. In the present study an attempt has been made to study the factors which lead to different health care choices. Tuberculosis has been selected as a disease since it has been affecting the mankind for long and free WHO-DOTS strategy have been used under Revised National Tuberculosis Control Programme in India. Despite of making the tuberculosis treatment freely available at door step, people are not using it as their direct health care choice. People have tendency of hopping around from one health care to another prior coming to DOTS. A small scale survey data of 367 TB patients have been used (October 2010-January 2011). Data have been collected from slums of Mumbai where number of TB cases is high. Bi-variate and multi-variate techniques are used for analysis. Based on the information given by TB patients about their health care choices prior coming to DOTS, few pathways have been identified through which they have come through. It is found that only 8 percent of the patient directly went to the DOTS centre for check up. Less than one fourth of patients went to DOTS after visiting private allopathic doctor and govt. facility doctor. Bi-variate results also show that 16 percent of poor went directly to DOTS as compared to three percent of middle class and five percent of rich patients. Binary logistic regression models have been used for different pathways to establish the relationship between health care choices and predictors. It is found that illiterate and poor are more likely to go directly to DOTS centres. Patients with symptom of weakness have approached the DOTS directly than who have not experienced weakness. In third model where patients reach DOTS centre after consulting private allopathic doctor and govt facility doctor, patients aged 50 & above are six times more likely to choose this pathway than 18-24 age group patients at 5 percent level of significance. Female patients are three times more likely to choose this pathway than male counterpart. Education has strong influence on the selection of the longer pathway where patients with primary & above level of education are five times more likely to go to private and govt facility prior to DOTS than illiterate. Alcoholic patients are also three times more likely to choose the longer pathway. Female, educated, rich and alcoholic patients are making number choices of health care than their counterparts. Education has failed in making right choice of treatment. Therefore, there is need of household level counselling about the symptoms of TB and other opportunistic infections like HIV along with the exact health care choice.

24-2

The Choice of Self-Treatment in Thai Nguyen Province of Vietnam and Its Influencing Factors

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Some studies showed that self-treatment is pervasive in Vietnam. Because of the poor implementation of the drug regulation, self-treatment contains high health risk for the users. This paper aims at examining the magnitude of self-treatment and types of self-treatment, exploring the financial burden and its determinants at individual, household and commune levels.

This paper is a secondary data analysis of the research "Improved access, equity, quality and utilization of commune health center services in Thai Nguyen" conducted by Population Council and Institute of Population, Health and Development from January to June 2011 with 2695 individuals from 2490 households.

Of 1381 all illness episodes reported, 35.48% were self-treated, 53.86% sought care from providers and 10.67% did not take any treatment. Even when patients perceived their illness was severe, 17.07% severe episodes were self-treated. Most of total self-treatment cases bought drugs to treat themselves (74.32%), 22.19% asked the drug vendors without medical examination and the remaining portion used drugs available at home.

The mean cost of self-treatment was the lowest. The financial burden of self-treatment was much lower than those of public providers and private providers at any severity of illness episodes. The percentage of self-treatment cost per income of the poor household was much higher than the percentage of those with higher income.

Multivariate logistic regression model showed that the severity, the chronicity of illness, having insurance reduced the probability of self-treatment (OR: 0.32, 0.47, 0.42 respectively; $p<0.001$). It is interesting that the increasing age, living in communes under program 135 lowered the option of self-treatment (OR: 0.74, 0.56 respectively; $p<0.001$). Male patients were 1.44 times as likely to use self-care compared with females ($p<0.05$). The model of self-treatment versus no- treatment found that the probability of self-treatment of mild illness. The illness of those living in household headed by males are higher than those in households headed by females, at 1.69 times respectively ($p<0.05$).

Self-treatment is common in Thai Nguyen (35.48%) and pharmacy contact is the most common type of self-treatment. Self-treatment expenditure is a financial burden for the poor. The results in Thai Nguyen are consistent with the findings of other studies on health seeking behavior in Vietnam. As buying medication is the dominant type of self-treatment, it is necessary to improve the implementation of the drug regulation and the awareness of the population on self-treatment especially for the poor. The influencing factors provide evidence for health planners, health care professionals in designing health policy or intervention programs.

Key words: self-treatment, health seeking behavior, Thai Nguyen, Vietnam, self-care, self-medication

24-3

Estimation of Willingness to Pay Secondary Health Care Services in Tamil Nadu, India

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The present study has explored the willingness to pay (WTP) for secondary health care services (SHCS) in rural and urban environment of three districts in the state of Tamil Nadu, India during 2009-2011. Since the governments are struggling to mobilise additional financial resources to provide essential health care services to the deprived population in the country, assessing the WTP for enjoying the services are realised as very important at this juncture. In realising the importance of augmentation of resources, it has been decided to introduce contingent Valuation Method (CVM) for WTP. A disproportionate systematic random sampling method has been adopted for the selection of households. Thus 720 respondents have been selected as sample; representing 240 respondents from each of the three districts represent 120 from rural and 120 from urban. To classify the respondents in terms of their WTP on health care services, mean standard deviation (SD) was used. Further multiple linear regression analysis was employed for identifying the factors, which determines WTP.

Majority of the surveyed respondents' gender was male, literacy was high and they were belonged to economically active age group. They generally involve themselves in the agricultural activities and avail employment. Their per capita income is very close to the national and state figures. The total WTP for twenty six SHCS from entry fee to dental service in the three districts is 98 per cent. The range of WTP for the same is from 87 per cent to 98 percent and the amount of WTP ranges from Rs.2.00 to Rs. 7000. The SD of twenty six SHCS from entry fee to dental problem is smaller than the mean value of respective services. The estimated R^2 values for twenty six SHCS are less than 20 per cent. This regression model for determinants of WTP on related independent variable, reports that the selected 12 variables have lower impact on WTP for SHCS in a public health hospital. The study reports that the other exogenous factors like intensity of disease, accessibility of services, quality, urgency, need, etc, are the predominant determinants of WTP for SCHS. The present research contends that constitution of district level co-ordination committee for fixing and implementing user fee for public health services. Introduction of nominal fee (user fee) for SHCS (curative services) may be fixed for affordable population, free services for BPL population; finally it is of utmost importance to health professionals to follow ethics in their profession.

Key words: Willingness to pay, Secondary health care, Common, Acute and Chronic diseases, Public health sector, Private health sector and Cost.

25-1

Impairment, Disability and Mental Health of Older Females in KDSS, Thailand

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Most of the research showed older females reported higher proportion of depressive symptoms compared to older males. Besides, studies found that higher proportion of women suffer from impairments and disability than males. Previous studies also suggest that older women who have impairment and disability may experience increased symptoms of depression compared to the women who are healthy and not disabled. The objective of this paper was to examine the status of mental health particularly the depressive symptoms of older females living in the Kanchanaburi Demographic Surveillance System (KDSS), Thailand and whether impairments and disability affect their mental health.

A study was carried out in KDSS among the older women aged 60 years and above to examine their mental health in 2006. Pre-tested structured questionnaire was applied to collect information at community level. The mental illness specifically the depressive symptoms were measured by the EURO-D scale. This scale was validated in Thai context before using in the survey. The scale has score from 0-12. The respondents were categorized as having no depressive symptoms who had 0-5 score and those categorized as having depressive symptoms who had score >5. Under impairment hypertension, diabetes, arthritis, cardiac disease, respiratory problems, eye and hearing problems were considered. Questions were asked under disability were difficulties related with standing, washing, getting dressed, walking, performing household responsibilities, participating in community activities, concentration and dealing with people.

The total sample size was 556. Among the respondents 35.8% women reported about depressive symptoms. More than half of the respondents were 60-70 years old and widowed, around 40% had no schooling and one-fourth were working in agriculture sector. Every six women out of ten women reported four or more impairments and mild disability. Multivariate analysis was applied. Elderly women had four or more impairmenst were 4.7 times more likely to report depressive symptoms. The females who had medium and low level of disability had 3.0 times and 1.3 times more likely to complain depression compared to those females had no disability. Besides, those lived with their grand children were 3.0 times more likely to report depressive symptoms compared to those lived with spouse and children. Age, education, marital status, children's migration and living arrangement of the respondents were not significant.

The life expectancy is increasing in Thailand and the feminization of ageing is also happening. Targeted programs on prevention of impairment and disability among the older women should be considered in the community level.

25-2

The Compounding Effects of Demographic, Socio-economic, and Morbidity to the Future Demand for Health Care in an Ageing Population: A Case of Indonesia.

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The ageing of population is often associated with the strain of health system due to increasing number and share of utilization of health care services among elderly. The extent to which pure demographic effects are mingling with non-demographic factors, however, was rarely addressed. This study aims at investigating the effects of demographic change to the demand for health care of future population and comparing these effects with social economic and chronic morbidity factors in Indonesia. Using individual and household level data from various years of Indonesia Family Life Surveys and National Social Economic Surveys, discrete choice models are used to investigate the demographic, social economic and chronic morbidity determinants of health care utilization and choice providers. Their propensities, along with the structure and size of population, are then projected to the future to assess the magnitude and pattern of demand for health care of the future population. The micro simulation combined with macro projection enables us to discern the contribution of demographic from social economic and chronic morbidity factors to the overall healthcare utilization and choice of providers. For Indonesia case, the study shows that the pure effects of age and sex are quite substantial both in the size and pattern of utilization. However, these demographic effects can be either compounded or undermined by non-demographic factors such as increased health insurance, income, and education level as well as chronic morbidity. And depending on the advance of the demographic transition stages, the share of health care utilization among elderly to the total utilization might not as high as commonly been perceived. This study offers new insight that the effects of demographic change to the future demand for health are not straightforward if we are to acknowledge that ageing is not a exclusive process, but it progresses along with the change in morbidity and other social economic factors, which is the case of many developing countries.

25-3

Isn’t It Too Early to Talk about Elderly Population: A Case of Missing Link?

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The estimated mean age at menopause in India is much lower than that of developed world (41.6 vs. 50 years). The life expectancy of an India woman is increasing along with the raise in the population above 45 year (19 percent of total population), indicating that an Indian woman will survive nearly for 30 years after attaining menopause. According to National Family Health Survey, 2005-2006, 18 percent women in India between ages 30-49 years, have undergone menopause/hysterectomy. So, there are many more women to suffer before they attain the status of Elderly.

Indian health system primarily concentrates on the needs of women during reproductive span with a recent focus on the health of elderly. There is very little or no focus on health needs of women outside ‘reproduction' and ‘aging'. The paper aims to address the general as well as sexual health needs of post menopausal women. A community-based retrospective study was conducted in India on 2,600 households. A sample of 247 women with menopause/hysterectomy (<50 years) was identified and interviewed.

Results indicated that menopause poses a big challenge during middle ages and to the healthy aging of a woman. Along with several expected menopausal syndromes, 80 percent women reported to loose their interest in sexual intercourse and also reported several sexual health and urinary symptoms. Women also seemed utterly negligent of their health. They usually turned to medical services when it was too late and their health problems became chronic or irreversible. A lack of interpersonal communication between doctor and patient also existed. Not only these health problems arise after menopause, but bad health during reproductive period also reflects well on the health of middle aged women. With the increase in life expectancy and population, various concerns associated with the health of elderly people are emerging. Therefore it is time to shift the focus of public health to address the emerging health issues of middle aged women and to fill the know-do gap.

25-4

An Impending Burden of Disabled Seniors? - Assessing the Health of Asia's Elderly

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In most of the industrialized countries population is ageing. In particular, the share of elderly is growing rapidly in North America and Europe, which motivates several researches to investigate this phenomenon and analyze the healthiness of seniors. Unhealthy seniors can result in a societal burden, in contrast to healthy and productive seniors. To this end, it is very important to analyze healthiness with respect to aging to discover future challenges in time.

India and China are currently not so much affected by the burden of aging. To give an example, only 5.5% of India's population is above an age of 65, which affects the government to focus on the majority of its social and industrial potential, namely the young. Whilst many seniors are suffering from mental and affective disorder also their physical abilities are not generally satisfactory. The share of the seniors in percentage terms is not large, but in total numbers it is huge. These are non-negligible and growing groups, which deserve a good quality of life in their senior ages.

Motivated by the described situation I investigate the health of Asia's older population concentrating on China, India, Japan and South Korea. I primarily focus on reflecting elderly's' current health situation in terms of physical and mental functioning by age and sex. Additionally I try to identify and analyze causes of this variation, in part to provide a possible understanding of the current problems Asian societies face.

We use three surveys SAGE (China and India), JSTAR (Japan) and KLOSA (South Korea), which are nationally representative for 50+ population and conducted between 2006 and 2007. All three surveys are based on the Health and Retirement Survey (HRS), therefore all health measures and demographic variables, which will be used in the analysis, are relatively comparable.

Reporting the quality of ageing in terms of being able to perform activities in a daily late-life is often estimated by disabilities with ADLs and IADLs. These measures are well defined, but especially doing cross-country comparisons these self-reported measures can cause bias, as for instance cultural differences have to be considered. Therefore I will investigate IADLs, ADLs as well as other body limitations, but I will measure these against the more objective muscular fitness measure grip strength. In the literature the simple non-invasive marker of muscle strength is often used to predict morbidity and limitations in physical functioning. So health proxied by grip strength will be analyzed with proper statistical methods. I will also contrast the health of the elderly for countries as Japan with 22% of the population above 65 with China with only 9%, controlling for age, gender and education.

25-5

Multiple Morbidities among Older Adults in India: Insights from LASI Pilot

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The steady progress of demographic and epidemiological transition in India is driving a rapid ageing transition and in turn shifting major share of disease burden onto India's older population. The burden of non-communicable diseases is rising while infectious and parasitic diseases still pose significant challenges to public health, resulting in a double burden of disease. Paradoxically, India is known for chronic underinvestment in health care, while chronic diseases including cardiovascular diseases have become major cause of mortality, accounting for 53% of all deaths in 2005 (WHO, 2008). With increasing longevity, multiple morbidities (defined as co-existence of two or more chronic diseases) and co-morbidities (defined as two or more coexisting medical conditions or disease processes that are additional to an initial diagnosis) are becoming progressively common for older population. Overall, the rising prevalence of multiple morbidities and co-morbidities are known to raise the health care cost, add to the economic vulnerability of older adults and, result in adverse effect on their physical and mental wellbeing further exacerbated by socioeconomic deprivation and poor medical care facilities (Bierman & Clancy, 2000; Tu, 2004). In the backdrop of very little or no data available, this paper unfold the morbidity, multiple morbidity and co-morbidity experience of the older Indians using data from the Longitudinal Ageing Study in India (LASI), Pilot survey, 2010 conducted in the four states of Karnataka, Kerala, Punjab and Rajasthan.

The LASI pilot survey, 2010 sampled 1683 LASI age eligible individuals (aged 45 and their spouse irrespective of age) from 8 selected districts representative of abovementioned four states using a multistage stratified sampling. Based on self reported major chronic diseases: hypertension, diabetes, cancer, lung disease, heart disease (heart attack, coronary heart disease, angina, congestive heart failure, or any other heart problems), stroke and arthritis/ rheumatism, this paper examines a) the prevalence rate of major chronic diseases by state and socioeconomic background factors b) the experience of multiple chronic diseases and co-morbidities and their covariates. Additionally, we estimated multinomial logit model to assess predictors of single and multiple chronic diseases, and used zero inflated Poisson regression model to understand the determinants of incidence of multiple chronic disease.

Analysis reveals age as a strong positive gradient of chronic disease and multiple chronic disease prevalence besides considerable state variations and strong socioeconomic gradients. Among the states, Kerala has the highest prevalence and highest incidence of multiple morbidities. Zero inflated Poisson regression model estimates reveals age, education, economic status (wealth quintile) and physical activities as significant determinants of the incidence of multiple morbidities. Hypertension and diabetes are mutually the critical co-morbidities of each other while heart and lung disease are found to be other important co-morbidities.

26-1

The Determinants of Intergenerational Support across the World: *Evidence fom the Global Ageing Survey (GLAS)*

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There has been increasing interest among social scientists with regard to the role of socioeconomic, demographic and cultural situations on intergenerational finance and help and care transfers in society. With the rapid pace of socioeconomic development and both populations and societies generally being in transition in many parts of the world, traditional values and family dynamics are being affected. Although some researchers have attempted to explore the changing pattern of intergenerational transfers for specific geographical locations, there has been no global comparison yet made due to either an inadequate data set or complete lack of it. Utilising the 2007 Global Ageing Survey (GLAS), this study attempts to examine important determinants of financial transfers as well as help and care transfers among individuals aged between 40 and 79 years residing across 21 countries and territories in five major regions of the world. In the present study, it has been found that a respondent's age, gender, household size, health appraisal, education, employment status, marital status, contact between generations and geographical location are key factors affecting the receipt or provision of financial support as well as help and care support. Analyses have been performed at regional and country levels providing robust and reliable estimates. This enables us to reach more effective conclusions on populations overall as well as on specific geographical settings. Some policy recommendations and future research directions are put forward in the last part of this paper.

26-2

Low Fertility and the High Costs of Children and the Elderly in Selected East and Southeast Asian Countries: An NTA Approach

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This paper aims to shed light on the relationship in the allocative pattern of resources between children and the elderly in East Asia by employing the National Transfer Accounts (NTA) methodology. We examine, on the basis of time-series data for a few low-fertility East and Southeast Asian countries, the nexus between the direct public and private costs of children and the number of children that parents would raise during their reproductive span; and whether or not there exists the so-called "crowding out" effect, posited by some researchers to occur when children and the elderly compete for limited public and private resources.

26-3

A Longitudinal Study of the Effect of Intergenerational Support on Activity of Daily Living of Rural Elderly

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With the persistent declines of fertility and mortality, the aging process of population is accelerated in China. Due to the continuous out-migration of working-age adults from rural China, the population aging is much more serious in the rural China, and the situation has altered traditional patterns of intergenerational support among elderly persons who remain in rural regions. This longitudinal investigation examined the influence of intergenerational support, which include financial support, instrumental support, and emotional support received and provided from and to adult children (including to grandchildren), on the trend of the activity of daily living of the rural elderly in China over a 9-year interval.

Data derived from a four-wave longitudinal survey conducted in 2001, 2003, 2006, and 2009, respectively. The baseline survey, the first, the second and the third follow-up study were carried out with 1,634, 1,368, 1,067, and 808 individuals parents aged 60 and older living in rural Anhui Province. This study employed individual growth model to analyze longitudinal influence of intergenerational support on the activity of daily living of the rural elderly.

The results showed that receiving financial or instrumental support from adult children accelerated the descending rate of older parents' ADL, and providing intergenerational financial or instrumental support to adult children, and stronger emotional cohesion with children decelerated the descending rate of older parents' ADL. Life Satisfaction and depression could directly or indirectly influence on the trend of their ADL through intergenerational support. The study concluded the mechanisms of the effect linking intergenerational support to health status of the elderly, which have two direct and indirect paths.

The results revealed intergenerational support is based on the demand of the elderly, and under the condition of permission, the altruism behavior of the elderly could improve physical health of the elderly, which reflects that the concept of "enjoying oneself completely" for the elderly should be pondered again. The results of which receiving financial support or instrumental support from the adult children influenced on physical health of the elderly directly are against common rules, and show the selecting-effect of intergenerational support on health status. Under the background of out-migration of working-age adults, there are certain actual meanings of the results on the effects of public policy-analyzing and constructing of the social support system.

26-4

Living Arrangement and Elderly Financial Support during Rapid Demographic Transition and Economic Growth: A Case Study on Taiwan

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The living arrangement of the elderly is usually a significant determinant of their economic security and welfare. The issue is critical for poor elders in the developing world, where formal welfare systems are less extensive than in more developed countries. It is also of major concern for any economy undergoing rapid dissolution of traditional co-residence patterns or demographic transitions. Taiwan has experienced rapid demographic transition and economic growth since World War II. The dependency ratio of the older population (ages 65+) to working-age population (ages 15-64) rose from 45 percent in 1950 to 13.6 percent in 2005, and is projected as 71.6 percent in 2051. The population aging process reduces the number of children per parent, and therefore increases the responsibility of adult children in intergenerational co-residence and financial support. On the other hand, the continual economic development may weaken traditional family values in supporting parents, according to the theory of modernization. The proportion of elders co-residing with offspring dropped from 89.3 to 60.4 percent between 1971 and 2005.

How do older persons support their consumption financially in different living arrangements during rapid demographic and economic changes? Why is it so? What are the impacts and policy implications on the welfare of the elderly? These are important issues not only for Taiwan, but also for all societies.

Understanding the full picture of financial support is not easy because most surveys report only familial transfers between households. Familial transfers within household are difficult to capture because some consumption are public goods in nature such as food, housing, utilities, etc. Therefore, most studies in the literature rely on qualitative survey of older persons that report the frequency of familial transfers. The magnitude of the financial supports and comprehensive view of all types of financial supports are lack in the literature.

The objective of this study is to examine the living arrangement and financial support of the elderly during the rapid demographic and economic transitions in Taiwan. This study employs a new method of National Transfer Accounts framework that offers an effective solution to the data-deficiency problem. To begin with, the data are constructed from micro sources but are adjusted so as to be consistent with macroeconomic data. Secondly, the age profile of consumption and income is estimated on an individual basis for every age group. In contrast, previous studies of lifecycle consumption have usually analyzed the consumption of households according to the age of the head, giving less attention to the very young and the old. Third, the size of both inter and intra-household transfers is estimated, which has rarely been calculated before. By understanding the current financial support of the elderly, results provide insights on policy implications to improve their welfare.

27-1

Living Arrangements and Health of the Elderly in India: The effect of household and contextual level factors

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This paper investigates the link between living arrangements of the elderly and their well-being, while examining the strength of both household and contextual level effects in influencing the link. It is well acknowledged in demographic literature that the contours of global population have been undergoing marked changes over the past several decades. Additionally, one of the significant demographic processes of the current century is the inexorable momentum of population aging in the developing world. Given this background, India offers a particularly interesting context to study different dimensions of intergenerational relationships and aging as the country experiences socioeconomic transformations including urbanization and migration, changing policy environments coupled with a severe lack of institutional systems of care for the aged.

Drawing data from the *India Human Development Survey* (2004-05)-a nationally representative, multi-topic dataset of 41,554 households-findings from household level analyses using propensity score methods highlight the importance of the multigenerational families to the wellbeing of the elderly. Propensity score analyses also suggest a wealth effect and an urban advantage effect mediating the living arrangement-health relationship. Furthermore, multilevel analyses of data from both *India Human Development Survey* and *Census of India (2001)* corroborate the urban advantage finding from the household level analyses. More specifically, multilevel analyses using hierarchical linear modeling demonstrates that health of the elderly is not only affected by compositional factors (e.g. living arrangements) but is also influenced by the larger context created by urbanization.

This paper has both empirical and methodological contributions to the growing field of demography of aging in developing countries. First, as opposed previous empirical studies based on cross-sectional and observational data, that have been largely unsuccessful in eliminating possible selection effects, the current paper has adopted a multistage analytical procedure (i.e. the propensity score methods) that adjusts for confounding effects in the living arrangement and health relationship. Second, this paper sheds light on the complex interactions between micro and macro level factors influencing health behaviors of the population (here, the aged). Finally, by improving our understanding of causal relationships, this paper is a useful starting point to guide policy makers and program designers (reliant on findings of observational studies) of developing countries in making effective investment decisions on health and health infrastructure.

27-2

Physical and Mental Health Outcomes among Family Caregivers in a Large National Cohort of Thai Adults

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As populations age in many parts of the world, family caregivers are becoming increasingly numerous, yet insufficient attention has been paid to their needs. Informal caregivers contribute to the health system and constitute an important workforce. Information on the prevalence, health and wellbeing of caregivers is needed in middle-income economies but it is yet to emerge. This study derive from the 2009 4-year follow-up (n = 60,569) of a large national Thai Cohort Study. We report covariate-Adjusted Odds Ratios (AOR) for the association between family caregiver and health outcomes.

Among males being a part- or full-time family caregiver was associated with lower back pain (AOR 1.36 and 1.67) and poor psychological health (AOR = 1.16 and 1.68) but not with poor self-assessed health. Among females, being a part- or full-time family caregiver was associated with poor self-assessed health (AOR = 1.21 and 1.34), lower back pain (AOR = 1.47 and 1.84) and psychological distress (AOR = 1.32 and 1.52).

Among the covariates analysed for health outcomes, younger cohort members were more likely to report psychological distress; this was also noted for those who never married or were divorced, separated or widowed for both males and females. Currently seeking work, smoking and drinking were also associated with psychological distress. Belonging to the lowest income group, smoking and obesity were all associated with 'poor or very poor' self-assessed health and lower back pain.
Our findings provide evidence which should raise awareness of family caregivers, their unmet needs, and support required in Thailand and other similar middle-income countries. There is a need for a coordinated system that makes easier the complex work of family caregivers by providing the training and support needed, including financial, legal, and healthcare information

27-3

What Are the Health Impacts of Caregiving for Older Adults on Family Members?: Results from the Singapore Informal Care Survey

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Family caregivers of disabled older adults often experience significant health problems themselves. Previous research has focused on mainly Western populations which operate under different cultural expectations surrounding caregiving. There has also been little objective comparative work on caregiver and potential caregivers from data collected in a single data set. We use unique data recently collected in Singapore to examine whether the prevalence depressive symptoms, poor self-rated health and number of outpatient visits vary between caregivers and potential caregivers.

The Singapore Informal Care Survey (2010-2011) contains survey information on 1,190 older adults (>75 years) with at least 1 ADL limitation and their caregivers, and 379 older adults (>75 years) with no ADL limitations and their potential caregivers (as identified by the older adult). We used multivariate models to examine differences in depressive symptoms assessed using the 11-item CES-D (Center for Epidemiologic Studies) scale, self-rated health and number of outpatient visits in the last one month between caregivers and non-caregivers. Our models adjusted for various characteristics of the caregiver/non-caregiver and care-recipient/ potential care recipient including sociodemographic characteristics, number of chronic illnesses and level of disability of the caregiver and potential caregivier. We also adjusted for the mental and behavioral problems number of depressive symptoms among the care recipient/potential care recipient.

Analyses showed that caregivers were more depressed, had poorer self-rated health and had greater number of outpatient visits compared to non-caregivers, adjusting for health status of the care recipient/potential care recipient.

The study indicates the need for support services to the family caregivers of older adults with ADL limitations. The findings also suggest that as the Singapore population ages and the need for caregiving increases the health of caregivers may be a significant drain on the health care system in Singapore.

27-4

Intergenerational Correlations of Health among Older Adults: Empirical Evidence from Indonesia

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It is widely believed that family background has a significant influence on children's life. The vast majority of the existent literature has focused on the relationship between parents' education and income and the education and income of their children. Surprisingly, however, much less work has been done on the intergenerational transmission, or correlations of health. The main objective of this paper is to examine the correlations of health across generations using the Indonesia Family Life Survey (IFLS). We take advantage of the richness of IFLS and examine several health measures of respondents, including self-reports and biomarkers. As measures of health of both parents, IFLS has information on whether they are dead at the time of the last wave in 2007, their general health status and whether they have difficulties with any ADLs at the time of the survey or just before death. The findings suggest strong intergenerational correlations between the measures of parental health, schooling, and the health of their adult children. We also examine how these intergenerational correlations might change for respondents born in the more developed parts of Indonesia compared to the less developed areas. Interestingly, these health associations are much lower for respondents who were born in Java or Bali. These are areas of Indonesia that have experienced the most rapid economic growth over the past 40 years. This suggests that being born and growing up in developed areas, which may have better health infrastructure, substitutes for the influence of parental health.

28-1

Assessment of Independence in Daily Activities and Self-Rating of Functional Difficulty among Indonesian Elderly

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The ability to perform activities of daily living and physical function is the most widely used indicator to assess the degree of disability. This paper aims to examine the information gained from the 2010 population census on independence in activities of daily living (ADL) and self-rating of functional difficulty. The 2010 Indonesia population census for the first time collected nation-wide information related to the ADL and self-rating of functional disability such as vision, hearing, walking/stepping stairs, and memorizing. Each of these variables is administered in the census with a self-rating of difficulty accommodating three options: without difficulty (independence), some difficulty, and difficulty. The descriptive analysis and cross tabulations are employed considering differences in age, sex and place of residence. The findings suggest that high percentages of the Indonesian elderly are independent in ADL, having no difficulty in vision, hearing, walking or stepping stairs, and memorizing. Two per cent or less report having difficulty in each of the variables accessed, and a higher percentage of those having some difficulty is observed. Female elderly are more likely to experience difficulty in all variables assessed than male elderly. Rural elderly has slightly more difficulty in performing all the assessed variables than the urban elderly. Age difference is very significant. Considerable difference is identified in which sex differential is getting more important among the oldest old than the younger ones. This study suggests that the oldest female elderly living in rural areas are more likely to need helps in performing activities of daily living and spend more time in a disabled state.

28-2

Feminization of Ageing and Physical Disability among Elderly: Evidence from a Panel Study of the Kanchanaburi Demographic Surveillance System, Thailand

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The rapid demographic transition has caused the feminization of ageing which looms particularly large for Thailand. Though several aspects of gender inequality in health have been persisted, an analysis of gender dimension of physical disability among Thai elderly is limited, particularly longitudinal study. Therefore, this study focuses on gender inequality in falling into physical disability by employing panel data. The study utilized pooled panel data of the Kanchanaburi Demographic Surveillance System (KDSS), Thailand which collected in the year 2000 and 2004. The sample size of this study is 3,207 cases whose aged 55 years and above at the initial year of the study (2000) and reported that they did not experience any difficulty in activities of daily living (ADL). Then they had been followed until 2004. Follow up has been done in order to explore whether they had reported any physical disability at the end of the study (2004). The difficulty of daily living is measured by using reported ADL. The analysis employed panel data by using logistic regression with random effect. The results revealed that without controlling for other factors females are more likely to falling into physical functional disability when compared to their male counterparts. However, gender does not matter when other variables are taken into account. It reveals that age, number of chronic diseases that they had experienced, current working status and health behaviors are significant predictors of likelihood of reporting physical functional disability. The results suggest that future health policy should focus on preventing and reducing chronic diseases as well as promoting active and healthy behaviours among population in order to ensure better quality of life for Thai older adults.

28-3

Elderly Living Arrangement: Does it improve the Real or Perceive Health Status among Elderly in Rural Bangladesh?

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Bangladesh is passing through the later stages of demographic transition with its inevitable challenges of a huge absolute and relative numbers of elderly people with a threat of non communicable or degenerative diseases. In the recent past, aging, elderly and the non-communicable diseases were the concern of developed countries but rapid demographic transition and subsequent change in the age structure and inevitable emergence of non communicable disease in the developing countries alter the situation and forced the developing nations to have a serious thinking on elderly in comprehensive manners. Bangladesh has around 2.4 million elderly population and will be one of the four countries in Asia with high elderly population (20.8 million) in the year 2050. However, such a population has insufficient social security system for known reasons. Empirical studies suggest that elderly people are now living primarily with their adult children. But how much their activities and health status vary with different family structural environment is virtually unknown.

Thus using a WHO study on AGEing and adult health and the International Network for the Demographic Evaluation of Populations and Their Health in developing countries-2006 and an ongoing Health and Demographic Surveillance System (HDSS) data from Matlab, a rural area of Bangladesh , the study attempts to analyze the elderly situation. A total of 4,000 randomly selected people aged 50 and over from HDSS database were interviewed in the field for assessing health among older people in the form of self-rated health, health state, quality of life and disability level in persons. The study is examining whether the living arrangements and family structure of the elderly have any effect on self-rated health, health state, quality of life and disability level of the elderly people.

Our preliminary results suggests that (all four indicators of health, self-rated health, health state, quality of life and disability level) health was better for males than females, and health deteriorates with increasing age. Elderly in current partnerships had generally better health than those who were single, and better health was associated with higher levels of education and asset score. A further analysis incorporating household structure suggests that elderly living in a nuclear household is better off than elderly living in other types of household and worst if they live in a eroded stem or extended household environment in general and worse if they are women. These findings will further be examined in a multivariate environment. Policy implication of the study will also be discussed.

28-4

Living Arrangement and Treatment Seeking Behavior: A Study on South Indian States

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In the changing scenario of family structure from joint to nuclear, the living arrangement of elderly has been affected a lot. But since responsibility and tradition still have high values in India elderly are living with their children. Studies have found that the changing family structure leaves elderly to live in poor health and economic condition Very few studies have tried to look at if living arrangement affects health, treatment seeking, and economic conditions of elderly specifically in Indian context.

The study explores the distribution of elderly by various socio-economic and demographic characteristics. The study also tries to find, whether living arrangement affect treatment seeking among elderly or not, in south Indian states.

Data from National Sample Survey (NSS) 60th round is used for the study. The survey was conducted for Morbidity, Health Care and the Condition of the Aged. A sample of 34831, 60 plus aged person was taken from four states 2182 from Andhra Pradesh, 1529 from Karnataka, 1766 from Kerala and 2357 from Tamil Nadu for the study.
Bi-variate analysis was used to find the distribution of the elderly by different background characteristics and for different living arrangement. Binary logistic regression model was used to see if living arrangement affects the treatment seeking behavior of elderly those suffering from non-communicable disease.

Around 80 percent of the elderly are living with their children either with or without spouse. Majority of elderly living with children without spouse are found to be economically dependent on others than those living with spouse only. Prevalence rate and treatment rate of non communicable disease is high in all the living arrangement for all socio-economic and demographic characteristics. Treatment rate are highest in Kerala, followed by Tamil Nadu, declines as age increases and found to be higher among male, those belonging to urban area have higher education and belong to higher MPCE quintile group for all living arrangement

The study concludes that family plays an important role in south Indian States, as majority of them are found to be living with their family. Treatment seeking among elderly is found to be more likely with those living with children either with or without spouse and significantly less likely for those living with others. This gives a positive association of living arrangement with treatment rates.

29-1

Social Pension for Older People in Bangladesh: Weaknesses, Strengths, Lessons and Potentials for Scaling Up

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To address the old age problems and vulnerabilities, the Government of Bangladesh has introduced a social pension scheme for the country's older people in 1998 with an aim to transfer some cash assistance to them so that the old age vulnerabilities and insecurities are reduced, if not removed totally. The programme has been very popular since introduction and has been experiencing almost continuous expansions over the years since introduction accomplishing substantial expansion by now in terms of both beneficiary coverage and budgetary allocation. Such safety net programmes while aim at bringing tangible and direct benefits to the vulnerable groups through cash or in-kind transfers, their effectiveness to alleviate poverty and deprivation of these groups is almost always adversely affected by inefficiencies, malpractices, abuses and corruption that are found to associate implementation/administration of these programmes--- eroding the programme benefits.

This paper with the help of secondary information such as programme documents, other secondary materials including research studies, conversational interviews with the policy makers, and focus group discussions with the beneficiaries and non-beneficiaries reviewed the Old Age Allowance Programme of Bangladesh. It particularly examined the basic features, implementation procedures, impacts, weaknesses and strengths of the programme, and sought to identify the key lessons and implications for policy and practice. It also examined the potential of scaling up the current means-tested programme to universal one so that all older people can be brought under this programme and the programme be based on rights of the older people instead of having a 'charity flavor'.

The study suggests that while this porgramme has huge positive impacts on the lives of older people and their families, it suffers also from few weaknesses. Yet, the Asian countries who intend to introduce such programme can learn from the experiences of Bangladesh. More importantly, most of the programme's weaknesses that are noticed can be overcome if the programme can be scaled up to a universal one. Estimates are of the opinion that such up gradation of the programme with reasonably decent benefit size, is possible in Bangladesh provided there is political will.

29-2

Old Age Security and Fertility in Rural Andhra Pradesh, India

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This paper presents the results of comparative study of old age security value in rural Andhra Pradesh, India. The research hypothesis is that the lower the dependence of seniors on social security provided by children, the lower their fertility level.The results are based on interviews of 600 males aged 60 years and above comprising of 300 pensioners and 300 non-pensioners. The findings reveal that an overwhelming proportion of non-pensioners expect support from children and rely to a great deal on them than pensioners. Thus lower socio-economic status may be one of the main factors for high perceived old age security value of children. This study clearly supports the research hypothesis.

Key Words: Fertility, Old Age, Security, Value of Children, India.

29-3

Living Arrangements of Elderly in India: Policy and Programmatic Implications

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Of late, studies on living arrangements of older persons have assumed importance in view of the expanding cohort of older ages due to declining fertility and mortality and increasing longevity of the people. The increasing number of elderly has already been a matter of concern in the developed world, both from the perspective of social policy and programming because the costs of maintaining and providing care are increasing exponentially. In developing countries like India, where social pensions are meagre and health insurance yet to be operationalized, the traditional support system of physical, emotional and economic security is taken care of by the younger generation. With changes in the demographic and economic fabric, family structure has undergone changes impacting the living arrangements of elderly in India. Such changes have profound implications on provision of care and support to the elderly and researchers have used living arrangements of the elderly, as one of the proxy measures of their well-being.

This paper attempts to study changes in the pattern of living arrangements among elderly in India, on the basis of two rounds of the National Family Health Surveys (1992-93 and 2005-06). The paper investigates differentials by residence, social, economic and demographic characteristics. The trends reveal that there is ruralization and feminization of ageing happening in the country. While the proportion of elderly (80+ ages) has declined for males, an opposite trend has been witnessed for females; particularly urban females. As regards education status, the percentage of illiterates has come down for males and females, yet significant improvements in educational attainment at secondary level and above is negligible. Further, 60 percent and 20 percent of women and men were widowed respectively and nearly 40 percent belonged to the two lowest wealth quintiles with remarkable urban-rural differentials.

Although familial care of the elderly seems to be strong in India, with around three fourths of elderly co-residing with their spouse, children and grand children, the trends in either living alone or with spouse only, has increased from 9 to 19 percent over the period and has resulted in increase in headship rate. The intensity of changes is seen more for urban elderly, as compared to their rural counterparts implying that elderly have to tend for themselves in future. Nonetheless, the fact remains that there is an increased nuclearization of families and a substantial majority are from the two lower wealth quintiles. To conclude, the government policies and programmes therefore will have to gear up and specifically address the social, economic and health security of elderly. For this to happen, highest level political commitment is essential, as the present institutional engagement of various government departments working in vertical silos may not yield the desired results.

29-4

Population Aging in Asia: The Role of Family Based Support in the Process of Succesful Aging

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A growing elderly population impacts health care systems, family support networks, pensions, and systems of social support. The argument that the family will care for the aged has proved a poor planning tool while Western experiences reflect the difficulty of maintaining national retirement schemes.

This paper examines the inter-relationships of modernization, development and the demographic transition on long term planning for the care of elderly populations in Asia. The paper reviews the solutions attempted by nations such as South Korea, Singapore and Japan, but our focus is on challenges facing nations where the elderly make up no more than 5% of the total population; including Malaysia, Indonesia, and Vietnam. These nations face different national circumstances but they share the advantage of time; their aged populations remain small enough to allow them to plan for the future.

We employ the increased availability of census and survey data to provide a more accurate picture of the future growth of elderly populations in Asia and to explore changing patterns in family support, coresidence and economic autonomy among the aged. Potential strengths and weaknesses of retirement and care-provision alternatives are then related to the identified patterns of change and we suggest core themes that can be used to positively impact national level policy development. Specifically, our analysis reflects the benefits of investing in family systems as opposed to individual systems of retirement.

While there is no one best answer for a region as diverse as Asia there are more promising alternatives than social security and provident plans which currently face insolvency in many Western nations. This paper builds on a growing body of research in this field and explores issues of specific interest to many Asian governments now facing the challenge of caring for a growing elderly population.

29-5

Government-Mandated Intergenerational Transfers Re-Linking Fertility and Material Security in Old Age

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As confirmed by empirical studies and by population theory, exemplified by pioneering research by J. C. Caldwell and other eminent demographers, intergenerational economic exchanges constituted a crucial prop supporting elevated fertility in traditional agrarian societies. Children's labor contributions were an appreciable economic asset for the parents. More importantly, material security in old age was provided by working adult children, imposed by generally accepted social rules. Economic development-industrialization, urbanization, greater spatial mobility-undermined these relations and, pari passu, the central economic rationale for having children. The steady decline of fertility as modernization progressed is attributed in no small measure to the erosion of family-level intergenerational material transfers. Old age security was increasingly seen as to be secured by accumulating marketable assets and through savings mediated by privately acquired obligations, such as provided by annuity contracts. In that endeavor children were a distinct burden. For the relatively poor majorities in industrial societies private arrangements for satisfying even basic material needs in old age have proven inadequate. Modern states gradually adopted government-run comprehensive social security schemes as the basic layer in the sources of income for the aged. The arrangements adopted often imitated private markets, investing obligatory savings through taxation of wages into funds from which the savers were eventually repaid in the form of pensions. In fact, however, social security as run by governments operated on a pay-as you-go basis, that is as an intergenerational transfer, individual allocations typically combining a politically determined redistributive component with one reflecting life-time contributions. Changing age distributions consequent upon fertility decline rendered such government-promised transfers a major fiscal burden that appeared to be increasingly untenable. Micro-level perceptions of the schemes' dire prospects exert a pressure for supplementary voluntary savings during the working years, thus reinforcing the tendency to avoid the private economic burden that raising children entails. Confronted with aggregate low fertility levels that, if sustained, imply shrinking populations and increasingly large proportions in old age, governments have adopted various measures that sought to stimulate fertility by assorted material rewards that alleviate the perceived private costs of children to parents. The general record of these endeavors indicates very poor success. Remarkably, governments overlook the potentially strong fertility-promoting and ethically and politically well justified incentive that social security schemes could provide by re-linking pensions with prior fertility. This could be achieved through government-mediated direct transfers of a substantial share of workers' social security contribution to their still living retired parents. I have proposed such an arrangement a quarter century ago, but the proposal elicited only limited responses. The present paper elaborates the intricate economic, political, social, and demographic characteristics of the proposed reform and critically assesses its appropriateness and potential for developing countries, especially in Asia.

30-1

Rethinking Aging in Asia

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Population aging continues to be a matter of significant international concern, in part because of the burdens that the elderly are expected to impose on others. This expectation is based on conventional measures of aging that rely on fixed chronological ages. As life expectancies increase and people remain healthy longer, policy-relevant age-specific characteristics of people change. Because of this, measures based solely on fixed chronological ages can be misleading. There are now ways to measure the extent of aging that take improvements in health and longevity into account. In this paper we apply two new measures of aging introduced in our previous studies. Using World Population Prospects, the 2010 Revision we show, that although populations in Asia will be growing older in many countries as measured by their median ages and proportions of population above age 65, they will probably experience much slower aging and in some cases even grow younger, as measured by alternative measures of aging that take into account the changes in life expectancies. Population aging will certainly provide challenges, but there is no reason to exaggerate those challenges through mismeasurement.

30-2

Psychological Well-Being and Support from Children: The Case of Thai Elderly

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This article investigates the relationship between support from children and psychological well-being of the Thai elderly. Using data from the 2007 Older Persons Survey, we estimate ordered logit regression models to determine how various forms of support from children are correlated with psychological well-being - constructed from the following symptoms/feelings: (i) having less appetite, (ii) feeling worried, (iii) feeling annoyed/irritated, (iv) feeling desperate, (v) feeling life has no value, (vi) feeling unhappy, and (vii) feeling lonely. In the questionnaire, each item is assessed in an ordinal scale, with answer 0 indicating "never", 1 "sometimes", and 2 "always". For the analysis, these negative items were reverse coded and used to construct the psychological well-being scale which ranges from 0 (least positive) to 14 (most positive). We also control for demographic and socio-economic variables. The analyzed samples are confined to 20,695 individuals who are 60 years and older, and responded to the questionnaire by themselves.

The results show that around 70% of the respondents reported having at least one of the symptoms in the month prior to the survey. The average scaled score of this sample is 11.54, with standard deviation of 2.64. Controlling for differences in demographic and socioeconomic status, the study finds that the number of children, living with at least one child, and providing financial support to children are statistically correlated with parents' overall psychological well-being. In particular, living with at least one child improves all but one of the individual symptoms as well as the overall score. The number of children and providing financial support to children, on the other hand, are negatively correlated with the overall psychological well-being score. When we analyze the symptoms separately, the number of children is found to be correlated with less appetite, feeling worried, and feeling annoyed/irritated. In addition, providing financial support to children is strongly correlated with the following: feeling worried, feeling annoyed/irritated, and feeling unhappy. On the other hand, receiving financial support from children is strongly correlated with not feeling desperate and not feeling that life has no value. For the overall psychological well-being score, older persons with the following characteristics are likely to have lower score: being widowed, being divorced/separated, having poor health, having low level of education, having unmet need for work, having low income, having debt, and residing in rural area (as compared to urban area). Overall, the results stress the importance of support from children in terms of living arrangement and financial support in improving older persons' psychological well-being.

30-3

Demographic Transition and Population Aging in South Asia: Challenges and Opportunities

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During the second half of the twentieth century, there has been a remarkable decline in fertility in the Asian region. The region as a whole experienced a drop in the total fertility rate (TFR) from 5.8 births per woman during the period 1950-1955 to 4.0 in 1975-1980, with further decline to 2.7 in 1995-2000. The TFR of the region is estimated at 2.3 in 2005-2010. However, this regional average masks a considerable difference in the TFR among subregions.

The TFR has plummeted to below the replacement level (2.0) in Eastern Asia in 1990-1995 and it continued to fall to 1.6 in 2005-2010. While South-Eastern Asia has witnessed a remarkable drop in fertility approaching close to replacement level at 2.3, in Western, Southern and Central Asia, the TFR is 3.0, 2.8 and 2.6 children per woman, respectively in 2005-2010.

As with fertility, there has been a remarkable improvement in life expectancy at birth. In Asia as a whole, a child born today can expect to live on average 70 years, up from 45 years 50 years ago. There is, however, a considerable difference in life expectancy in the subregions of Asia. Eastern Asia has the life expectancy at birth of 74 years, followed by 72 years in Western Asia and 69 years in South-Eastern Asia. At the other end of the spectrum are Central Asia and Southern Asia where the life expectancy at birth is 66 years and 64 years respectively.

Declining fertility and mortality resulting in population ageing has emerged as a new issue challenging several countries in Asia, including some countries in Southern Asia. Southern Asia will exhibit a gradual shift in the proportion of the young-age population and old-age population. While the proportion of the population under age 15 will decrease, the proportion of the population aged 60 years and older will increase. The implications of such population ageing and associated growth in the size of elderly populations are of particular concern. They are often perceived as posing serious burdens for economic and social support and health care systems. The rising number of elderly on the one hand, and the declining number of the younger population on the other will also mean that there will be a shortage of caregivers for the elderly population.

This paper will first examine fertility and mortality trends in Southern Asia and its consequences to changes in age structure, dependency ratio, population ageing and feminization of the elderly population. Secondly, the paper will discuss challenges and opportunities brought about by the demographic transition and will conclude with some policy recommendations.

30-4

Living Alone, in Institutions or in the Streets: The Reality of Older Adults in the XXI Century in Argentina

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The issue of population aging has become one of the central aspects of the global demographic reality in the XXI century. In Latin America, after the demographic transition in the majority of countries, the aging process of the population is becoming more and more relevant.
In most of Latin American countries, the aging process is characterized by being faster than in developed countries and because it takes place in a context of deep socio-economic and gender inequalities.

This research was conducted during the years 2009 - 2010 and one of the axes of study was the situation of the elderly.

The main objective proposed by the researchers was the analysis of the meaning of aging in older adults from a perspective of gender, generation, rights and social inequality. Specific objectives were to develop the concept of generation and the meaning it has for the people interviewed. We analyzed the subjective perception of the role that the intergenerational relationships play during the third age, and specifically the transfers given and received, both material and symbolic.

In order to perform the analysis from different living contexts of 142 older adults, we divided the sample into groups: 58 older adults who lived with their families, 24 who lived alone, 39 that lived in nursing homes and 21 that were in a "street situation", who only went to a Day Homes to eat. Our work was based on a methodological strategy that combined interviews in depth and focused discussion groups. The criteria of selection of the people we worked with in this sample, older adults aged from 65 to 75 years, was defined by three additional axes: socioeconomic status, sex, self-reliant people without mental demential incapacities. We finally interviewed a total of 142 older adults, and we conducted four discussion groups.

Among the findings we obtained, we highlight the different representations attributed to old age, the sense of belonging to a generation, and its appreciation as a key aspect related to the intergenerational exchange, the inheritance of rigid values from previous generations and the acquisition of new experiences related to speed and dynamism coming from posterior generations.

The process of aging appears in a different way in each case, according to life experiences from each person. For some, it appears like a bridge between generations, and for others this continuity is broken. Symbolic transfer flows are rare in many cases, and rich in others. In all the cases that we studied, the transfer of material flows was poor.

30-5

The Determinant of ICT Use and Intergenerational Relationship among Elderly in Indonesian

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It is widely known that use of technology among elderly people (instrumental ADL, will enhance the cognitive ability among the elderly (Hogervorst et.al)). However, little evidence is found from the existing research especially on the use of the recent development of mobile phone and internet. Among the few, study by Adioetoemo and Nashrulah (2011) found that Indonesian elderly who have access and use of mobile phone and internet connection are less likely to suffer from social dysfunction. This means that these elderly people enjoy having contacts and communicating with their communities and their younger generations. High mobility and migration separated sons and daughters, who used to be caregivers, with their elderly. But the use of mobile phone and internet, enable them to maintain intergenerational relationship although they live separately even at long distance. The conclusion is that IT expands the horizon of intergenerational relationship beyond their vicinity of their houses.

This paper tries to explain further on what is the determinant of elderly people in Indonesia to use ICT that can maintain intergenerational relationship. It is expected that age of the elderly, education, place of residence, poverty status, will have significant effects on the elderly use of mobile phone and internet. Living arrangement is used as proxy for intergenerational relationship. This study uses the Indonesian National Social and Economic Survey 2009, a large sample survey with about 200,000 households through Indonesia.

31-1

Provision of First Trimester Abortion (MA, MVA) By AYUSH And Nurses: How Safe, Effective and Acceptable?

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Women have been legally entitled to abortion in India since the Medical Termination of Pregnancy Act of 1971 was passed. Nevertheless women in India continue to obtain abortions outside of registered settings and/or from uncertified or illegal providers. A main obstacle to safe abortion is women's limited access to appropriate facilities and trained providers. Experiences from both low and high income countries suggest that task shifting or sharing has been successful in both expanding services and improving outcomes for patients, without compromising on patient safety and satisfaction.
This paper provides evidence from two studies that compares the feasibility and efficacy of medical abortion provided by nurses and non-MBBS physicians with MBBS physicians and MVA provided by nurses with MBBS physicians. We note that it was recently presented at a satellite session on abortion held at the 6th Asia Pacific Conference on Reproductive and Sexual Health and Rights in Yogyakarta.

Using an equivalence study design, the Council undertook two studies one exploring whether nurses and non-MBBS physicians can provide medical abortion and second exploring whether nurses can provide MVA safely and if this is equivalent to medical abortion and MVA conducted by recently trained MBBS physicians. The study was undertaken in selected clinics of an NGO service provider in Bihar and Jharkhand.

Key outcome indicators include assessment of eligibility; assessment of completion status of abortion; compliance; efficacy of the method; complication rates and acceptability reports.

Study findings confirm that outcomes recorded by nurses and non-MBBS physicians in providing medical abortion and nurses in providing MVA are statistically equivalent to those recorded by MBBS physicians.There were no differences in eligibility assessment failure rates and completion of abortion assessment failure rates among the provider groups. Overall failure rates were low - MA-5% and MVA 1%. Finally, exit interviews show that irrespective of provider type, women were overwhelmingly satisfied with the services received.

Findings highlight that nurses and non-MBBS physicians can provide abortion services as safely, effectively and acceptably as MBBS physicians and make a compelling case for amending existing laws to expand the abortion provider base, thereby increasing women's access to safe abortion in India.

31-2

Abortion in Matlab, Bangladesh: Knowledge, Attitudes, and Decision-Making Processes

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Bangladesh has made a remarkable success in reducing its fertility rate, considering its socioeconomic disadvantages. At 2.0 children per woman, desired fertility is around replacement level, however, the total fertility rate is a half child higher (2.5). Current contraceptive prevalence is 58%, but the method mix is dominated by the use of short-term methods that are prone to use-failure and thus unintended pregnancy. Under these circumstances, it is likely that the incidence of abortion is increasing in the country.

To complement studies we have done of trends and differentials in the incidence of abortion and the method, the objective of this study to examine factors associated with unintended pregnancies, the decision-making processes by which women decide whether to terminate an unintended pregnancy, and their knowledge and attitudes about methods of abortion.

The study uses data from the Matlab Health and Demographic Surveillance System (HDSS) and associated cross-sectional socioeconomic data from censuses and data from a special survey fielded for this project. The Matlab study area are divided into (a) the Government-served where only standard health services available, and (b) the icddr,b-served where better reproductive health services are provided.

A longitudinal data file is constructed on about 120,000 pregnancy outcomes recorded during the period 1989-2008. New data was collected in 2009 from all the women (about 600) who reported in the HDSS that they terminated a pregnancy in 2007 or 2008 and also randomly selected, as controls, 1,200 women who had non-abortion outcomes (live birth, stillbirth, or miscarriage) during the same period.

Over the study period (1989-2008), abortion increased in both the icddr,b-served and Government-served areas while proportion of abortion done by MR increased from 38.0% to 78.6% and from 31.6% to 81.4% respectively in these two areas. Among women who had non-abortion outcome during 2007-2008, 11% were using contraception compared to 7% among those who had abortion; both the groups were using mainly temporary contraceptive methods. Thirty percent of the pregnancies to women in non-abortion group were unintended, but they chose not to terminate their pregnancies mainly because of disagreement among husband-wife/family member. By contrast, among those who had abortion, in 85% cases the husband-wife/family member agreed to do it. Both the groups had adequate knowledge about abortion procedure, but the group that had abortion were less likely think that there was a risk of complications from abortion and also less cost to perform abortion compared to those who had non-abortion outcome.

As abortion is increasing in Matlab area, it is important that the couple had proper knowledge of abortion as well as agreement among them related to reproductive goals.

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31-3

Who Are Going for Repeated Induced Abortion in India: Does Sex Preference Aggregate Repeated Abortions?

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Abortion is primarily a health concern of women but it is increasingly being governed by the patriarchal interests which more often than not curb the freedom of women to seek the abortion as a right. In present times, with the entire focus of women's health being on her reproduction, infact preventing or terminating it, abortion practice has become a critical issue. Abortion is, possibly, the most divisive women's health issue that policy makers and planners face particularly in developing countries. Given the fact that women in India have little control over their own fertility and also have poor health, the chances are very high that they may not only experience abortion, which includes both spontaneous and induced abortion once but perhaps more than once. Sex selective abortions cases have also become a significant social phenomenon in several parts of India. India has been growing wealthier and improving literacy rates in recent years, but these factors have also worsened the problem of abortions especially, sex-selective abortions.

All though abortion, sometimes intentionally, occurs in every society and a substantial proportion of pregnancies are resolved by abortion worldwide, there is little empirical research on why women obtain abortion, not only once but again and again. Therefore, this paper is an attempt to spot out the rationale for repeated induced abortions with special reference to sex selective abortions.

The study used the District Level Household Survey data (DLHS-3), 2007-08 which is one amongst the largest ever demographic and health surveys carried out in India. The study used bivariate, trivariate analysis and Cox proportional hazard model analyses to examine the effect of previous pregnancy outcome as Induced Abortion on latest pregnancy outcome among currently married women (age group 15-49) in India.

The results of the study more than support the hypothesis that repeated induced abortion is more among the women with higher son preference and greater socioeconomic status. Cox Proportional Hazard Model estimates reveal that relative risk of having repeated induced abortions is significantly higher among the women in younger age, higher socioeconomic status and with greater son preference. For instance, women in richest wealth quintile pose two times more relative risk of having repeated abortion compared to their counterparts. Similarly, relative risk of having repeated abortion among higher educated women (RR 3.35, $P<0.001$) is greater than no educated (RR 1.00, $p<0.001$). The women with greater son preference have three times more repeated abortion to women who do not have any sex preference for children.

The sex selective abortions are one of the leading causes of repeated abortions in India. However, with increasing socioeconomic status of households and medical advancement are aggregated, sex selective abortions leads to repeated induced abortions.

31-4

Providers' Perceptions on the Provision of Medical Abortion Services by Mid-Level Providers: Case of India

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Mifepristone-misoprostol abortion, a safe, effective and acceptable non-invasive alternative for early pregnancy termination, holds great promise to increase access to safe abortion in countries such as India, where abortion has been legal for 40 years, but where the majority of the induced abortions are conducted in uncertified settings, and/or by uncertified providers. Recent experiences from both low and high income countries suggest that task shifting or sharing has been successful in both expanding services and improving patient outcomes, without compromising patient safety and satisfaction. Available evidence highlights that many uncertified providers do indeed provide medical abortion. However, there is limited evidence available on the perceptions of obstetricians-gynaecologists, physicians and other health care providers about expanding the provider base to include those who are not certified, under the MTP Act, to provide abortion. This paper explores the attitudes of different types of providers with regard to expanding the medical abortion provider base to include those currently ineligible to do so, such as nurses and providers trained in Indian Systems of Medicine (ISM) and the interest of these other providers in being trained to provide medical abortion.

Data are drawn from a study conducted during 2009-2010 in selected districts of two states of India, namely Maharashtra and Bihar. The study had both quantitative and qualitative components. A survey was undertaken with 1200 providers, including 270 certified abortion providers, 210 allopathic physicians not certified to provide abortion, 240 ISM providers (AYUSH), 240 nurses/ANMs and 240 informal sector providers (Rural Health Practitioners and *dais*).

Results indicate limited support from Obgyns and other allopathic physicians for enabling trained nurses and AYUSH physicians to provide medical abortion services: just 15-19% held favourable attitudes about permitting non-allopathic physicians to provide medical abortion. Further, among those certified to provide abortion, few reported confidence in the ability of nurses or AYUSH doctors about assessing gestational age or the completeness of abortion. On the other hand, 44%-68% nurses and AYUSH physicians supported the ideaof enabling trained midlevel providers to provide medical abortion services. Nurses, but not AYUSH physicians also expressed confidence in their ability to assess gestation age or abortion completion status, and both of these provider types (nurses and AYUSH physicians) believed that they would not be able to provide medical abortion services as effectively as a trained MBBS physician, without intensive training.

Findings indicate that a major obstacle inhibiting the inclusion of nurses and AYUSH in the provision of abortion may be the negative attitude of certified physicians. Efforts are needed that focus on changing the attitudes of certified physicians and including them more actively in enabling the expansion of the abortion provider base to include trained mid-level providers.

31-5

Using Abortion Hospitalization Data for Studying Abortion: Challenges and Opportunities

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In countries where abortion is highly restricted or stigmatized, abortion complication cases admitted to the hospitals could be one of the most available sources of data, although this data will be bias toward more severe cases. Data recording parctices may be varied across hospitals and therefore data assessment prior to further analysis is an essential step to be carried out. This paper aims at providing an understanding on abortion hospitalization cases in Yogyakarta province, Indonesia, through analysis of data completeness, quality and limitations. Data were collected from 22 public and private hospitals in 5 districts of Yogyakarta province. Twenty nine main variables are extracted from paper-based medical records of 1460 cases of abortion related admissions to the hospitals.

Availability of collected variables by districts varies from 38 to 96 per cent, with cases from remote areas having less data availability. By type of the hospitals, the cases treated at the private hospital have better availability of data compared to the public ones. In total, 75 per cent of the cases have variables availability of 75 per cent or more. However, only 1.4 per cent of cases have all the variables. Categorization of data by their types show that administrative data is the most complete, followed by clinical and socio-demographic data, while the least complete one is reproductive health history data.

The hospital management and information system in Indonesia has applied the International Classification of Disease version 10 (ICD10) for diagnosis. However only 41 per cent of the cases were assigned with an ICD10 code. Further analysis also reveals that assigning an ICD code for certain type of abortion cases may be problematic in setting where abortion is broadly restricted. For example is in the case of incomplete abortion. Eighty-nine percent of incomplete abortion cases is categorized as spontaneous abortion despite of the difficulties that may exist in differentiating the signs of spontaneous abortion to the induced one. This is in contrast to the diagnosis of blighted ovum that has a specific ICD10 code. More than ninety per cent of the cases seem to be appropriately assigned under the blighted ovum code. The hospital reports are commonly provided in an aggregated number of cases by a certain ICD code and may miss this information.

Other problems encountered during data assessment arises with the inconsistencies of data within the case, illegibility of the words due to poor handwriting and massive use of various medical as well as general terminologies. However, assessing the data from the records also provides a better understanding in diagnosis practice in a certain hospital that will assist in making further adjustment. The data from the records also provides other information that can be useful for in-depth qualitative study such as in the narrative part that describes the routes that women take to obtain abortion service.

Despite all the limitations in data incompeletenes and accuracy, the study found that using abortion hospitalization data can provide rich information and is a feasible method to obtain data for study on abortion in Indonesia.

32-1

Australians Travelling Abroad for Assisted Human Reproduction Procedures: The Role of the Internet

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This paper investigates publicly available information about the use of overseas medical providers by Australian residents. In particular, the paper focuses on surrogacy, egg donations and sex selection, as these are the three main reproductive services which Australians travel for. These treatments are currently either illegal or heavily regulated in Australia, and in response to these legal constraints Australians who wish to use these treatments travel overseas to obtain them. In Australia 'altruistic' surrogacy and egg donation is legal, however commercial surrogacy and commercial egg donation is not permitted. It is very difficult to find a surrogate or egg donor who is willing to provide assistance for altruistic reasons and not receive any payment except to cover routine expenses. People who wish to use a surrogate or an egg donor need to publicly advertise if they do not have a family member or friend to provide assistance. With regard to sex selection, this is not available for 'family balancing' reasons, i.e. individuals cannot use technologies to choose the sex of their child for reasons other than 'to reduce the risk of transmission of a serious genetic condition' (NHMRC 2004).

Analysis is based on information from Australian medical providers, overseas clinic websites, and Australian internet forums and discussion boards. We use the grounded theory method (GTM, La Rossa 2005) to evaluate the text available from these sources. We find that some Australian clinics advise their clients to go overseas for procedures which are illegal in Australia. In turn, overseas fertility specialists actively market their services for residents in countries such as Australia where the procedures are not allowed. For the couples and individuals thinking of travelling abroad, we find a number of different considerations are important in choosing (1) whether or not to travel abroad, and (2) which country to go to. For surrogacy the two main countries travelled to are India and the United States. In choosing a country for surrogacy, important considerations are: the quality of care, the cost, and the ease with which parentage can be transferred from the surrogate to the intended parents. For egg donations the considerations are slightly different, since this procedure involves the contribution of genetic material of the donor mother. For these reasons, Australians typically choose either the United States or South Africa. For sex selection, the cost and location of Thailand makes it a popular destination for those looking to use services such as Preimplantation Genetic Diagnosis (PGD) to determine the sex of their next child. Further research will involve determining the scale of cross-border reproductive care by Australian couples and individuals.

32-2

Women's Infertility in India: Emerging Reproductive Health Problem and Policy Issue

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The study highlights the problems of infertility and treatment seeking behaviour among currently married women in India. Information regarding women's reproductive health was collected by District Level Household Survey interviewing 604840 currently married women of aged 15-49 years from 34 states and 6 union territories in India, during 2007-08. Information regarding infertility i.e problem in getting pregnant was collected. Further more information on treatment sought, if any, for different health services was elicited from those women who are suffering from infertility problem. Bi-variates analysis was carried out to understand the prevalence of infertility and sequentially Cox regression model used for three selected states to understand the hazard function of getting problem in infertility among currently married women. Result revealed that about 8.3 % of the currently married women in India are suffering from infertility problem. Among theme about 76% women faced this problem for their first conception. Finding also highlights that about 80% of women suffering form infertility problem received treatment or advices and about 33% of women who received any treatment preferred traditional and religious treatment. Result of Cox regression analysis shows that risk of getting infertility problem significantly increases for higher age group women but it is decreases with the children ever born in all the three states. Hazard risk of getting problems in pregnant is low for not working women that of working women. Result of binary logistic regression reveals that treatment sought behaviour is also determined by different socio economic factors. Infertility of women is not widely acceptable in a social set-up like India, where women only blamed if a couple do not have any child. So there is a need to look into the infertility problem in India by creating awareness about reproductive health and expanding the treatment facility. Furthermore, most of the couples remain out of reach from access to modern treatment facility due to lack of awareness about modern treatment facility and expensive treatment service. Hence, there is an urgent require of government regulation on the ‘infertility clinics' to ensure the quality of services and affordability of services.

32-3

Infertility Rises at Alarming Pace in India- A Critical Insight from District Level Household Survey-III

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Infertility problem has been a neglected research area in developing countries so far. The main focus has been given on different health issues rather than levels and determinants of infertility in India. Infertility can be categorized in to two types, i.e. *primary infertility*-, if the couple has never conceived despite cohabitation and exposure to pregnancy (without contraception) and *secondary infertility*-the difficulty in conceiving again after having conceived earlier (either carried the pregnancy to term or had a miscarriage). It is generally believed that more than 70 million couples suffer from infertility worldwide. Preventive and curative services for infertility have not yet been a priority in India despite the importance of motherhood. Hence, it requires an in-depth study in India to unmask this problem. Therefore an attempt has been made to understand the socio-economic and demographic factors, exaggerating situation of infertility in India and treatment seeking behaviour. Another is to examine the state wise variation in infertility problem in India and to unearth the types of treatment preferred for infertility problems in India. To carry out this study District Level Household and Facility Survey III (DLHS-III) data have been used. This is first time DLHS has covered the information on infertility. Bivariate and Multivariate models have been prepared to understand the effect of socio-economic and demographic factors for infertility problem and treatment seeking behaviour. To focus spatial variation of infertility problem and treatment seeking behaviour GIS software has been used.

In India, 8 percent women are suffering with infertility problem among them 6 percent women are primarily infertile, whereas 2 percent are suffering with secondary infertility problem. Rural women have more infertility problem rather than urban women and it is similar in case of primary infertility while in case of secondary infertility it is other way round. Infertility problem is much higher in West Bengal (14 percent), Goa (13 percent) and Bihar (12 percent) in comparison to other states. In contrast, though in Chhattisgarh and Orissa infertility problem is not negligible but the treatment seeking behaviour is less for any type of infertility. Another concern is that 24 percent rural women preferred religious places/faith healing for the treatment of primary infertility, whereas it is only 16 percent in case of urban women. Rich-poor gap is visible in case of preferred treatment for infertility. Type of occupation is coming significant and those who are engaged in primary sector are more likely to suffer infertility problem than those who are working in secondary and tertiary sector. Women's age, age at marriage and marital duration are the other significant variables to define infertility problem in India. Recognizing the importance of education and prevention, infertility treatment in India requires greater attention at National levels.

32-4

Experiences of Iranian Women Undergoing Assisted Reproductive Treatment (ART): A Phenomenological Study

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Approximately 15% of all couples in the reproductive age are infertile. Many of these couples are suggested to enter the assisted reproductive treatment by experts. Extended infertility treatment extracts a particularly devastating toll on the couple especially females. The inability to bear children creates a developmental crisis for a woman, disrupting her identity, her relationships, and her sense of meaning. Infertility treatment tends to be delivered in an impersonal way, with little attention to the psychosocial needs of patients. Little is known about the experiences of infertile women based on their perspective.

The purpose of this study is explore and describes women's experiences by Husserl's Phenomenology approach which represents infertility treatment in Iran society. The participants are purposive sampling between women undergoing in vitro fertilization (IVF) treatment at Royan institute, Iran. In this article, the data are generated from transcription of taped interviews. Data analysis was in accordance with the procedure by colaizzi (1978). The results emerge as constituents from the analysis.

As fertility is one of the most important areas of population studies and policies the findings of this study will add the knowledge of health providers and counselors to understand the real experience they have and improving caring and will help to provide a more clear perspective for policy makers to take decent approaches and policies in women's heath area and specifically infertile women.

Keywords: Reproductive health, Infertility, Phenomenology, in vitro fertilization (IVF), experience

33-1

"Top, Versatile, or Bottom?": Exploring Meanings, Preferences and Power Relations in Sexual Roles of Filipino Men Having Sex with Men (MSM) in Metro Manila, Philippines

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Most HIV researches among men who have sex with men (MSM) in the Philippines have explored sexual parameters and identities to determine risk and vulnerabilities as critical factors in the spread of transmission of HIV. However, little is known about the various sexual roles of MSM. We have yet to explore sexual roles and its contribution to HIV risk and vulnerability.

This study explores the meanings, preferences and power relations ascribed to sexual roles among Filipino MSM. Specifically, this study describes the rules attached to sexual roles, the preferences on age, height and body built, and the differences in perceptions of HIV risk.

Results show that sexual roles are not strictly tied with sexual identity and are as fluid as sexual identities. Sexual role is not entirely assumed to be an invitation to anal sex, because this seldom happens during a sexual act. Self-ascription of sexual role depends on choice based on experience, negotiation, emotional attachment, and power. Respondents also revealed that they prefer sexual partners of the same age, height and body built, valuing the importance of equality. However, these do not exempt the power dynamics during the sexual act.

Discussion on sexual roles must be integrated in HIV education programs for MSM for them to talk about masculinity, power dynamics and the sexual act itself, which will demystify current notions about sexual roles in relation to HIV. HIV education and communication strategies must not only be targeting MSM but also targeting topics that have an impact on them.

33-2

Safe Sexual Practices in High Risk Settings: Where the Theories Take Us?

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Lack of safe sexual practices in varying context has been a major issue in both developed and developing nation. Many studies have supported the efficacy of condom in reducing the risk of HIV/AIDS transmission in heterosexual intercourse but there is a very limited study which could correlate the condom attitude and condom use behaviour. This study aims to understand the variation of condom attitude in high risk settings and how far condom use varies with varying sexual partner, as well as to explore the relationship between interface of alcohol consumption and condom use using a unique set of data (ASHRA) collected in 2007-08 among young men in low income communities in Mumbai. The condom attitude is computed using Likert Scale on ten different items measuring perception about condom use on five point scale.

Health Belief Model (HBM) and AIDS Risk Reduction Model (ARRM) would provide the theoretical orientation for this research. *HBM assumes* that an individual behaviour is guided by expectation of the consequences of adopting new practices. This paper tries to understand people's attitude towards the use of condom using various assumptions and components of HBM. This is because people's attitude towards condom use, can be influenced by people's perception of contracting HIV/AIDS, and the consequences of using condom. The result illustrates that 27 percent of young men have lower positive attitude towards condom use whereas only 3 percent of young men have highly positive attitude. Noticeable fact is that 70 percent and 3 percent of young men in the high risk setting is having moderately and highly positive attitude towards condom use among those who reported wife as their sexual partner but when girl friend or others as the sexual partner, the positive attitude towards using condom is very low.

ARRM provides framework for explaining and predicting behaviour change effort of individuals specifically in relations of HIV/ AIDS. Thus, the ARRM can be useful in explaining people's perception of involving in risky sexual behaviour. Risky sexual behaviour can be viewed in the context of the number and types of partnerships, and sexual acts. Table reveals that young men who have more than two non-spousal sexual partners are highest among never married men and those who have consumed more alcohol. Condom use was reported frequently when the sexual partner is others and it is only 7 percent at the time of wife as a sexual partner. Logistic Regression revealed that young men in the high risk settings are significantly five times more likely to indulge in the risky sexual behaviour under the effect of alcohol. So relationship between the knowledge of the effectiveness of condom is a major contradiction and challenge in the fight against HIV/AIDS in the society.

33-3

Unprotected Transactional Sex and Socio-demographic Characteristics of Rural and Urban Female Sex Workers in Indonesia: A Comparative Mixed Methods Study

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Very little is known about sexual risk behaviour among rural female sex workers (FSWs) compared to their urban counterparts. This study used a mixed qualitative-quantitative methods approach to develop a revised Indonesian FSW typology for the comparative analysis of behavioural risk factors and socio-demographic characteristics of FSWs in rural and urban Indonesia. Analyses are of a survey of FSWs (n=310), in-depth interviews with a sub-sample (n=16), and participant observation over 12 months. Thematic content analysis of the in-depth interviews and ethnographic data identified important differences between rural and urban sex work environments and the dynamics through which these context-related factors can affect individuals' sexual risk-taking behaviour. Findings show how the decision to engage in risky transactional sex is made in the presence of other 'competing concerns', including economic pressure and unequal social power relationships at the workplace; and, that transactional sex risk is mediated by the type and geographic location of the sex work setting. Multiple regression analyses show that the likelihood of consistent condom use was significantly lower among rural female sex workers (adjusted OR: 3.75 95% CI 1.27-11.11, p=0.017) as compared with their peers in urban settings (adjusted OR: 3.22 95% CI 1.16-8.94), p=0.025). Further, there are trends that with increased educational attainment and smaller numbers of clients served per week, the likelihood of consistent condom use increases. Notably, factors considered as programmatically important in terms of HIV prevention initiatives, such as condom awareness (adjusted OR: 0.59 95% CI: 0.25-1.38, p=0.222) and availability (adjusted OR: 1.19 95% CI 0.58-2.44, p=0.626) were not significantly associated with consistent condom use after controlling for the other factors in the model. In conclusion, the type and geographic location of sex work settings are predictive of consistent condom use in transactional sex. Policies and interventions need focused strategies to reach FSWs working in heterogeneous settings, including those working in rural areas.

33-4

Sexual and Injecting Behaviours among Injecting Drug Users in North-East India: Findings from Polling Booth Surveys

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The North-east Indian states of Nagaland and Manipur have among the highest HIV prevalence in India, fuelled by an epidemic of injecting drug use. In 2008, the HIV prevalence among injecting drug users (IDUs) in Manipur was 28.65% and in Nagaland was 3.16%. Proximity to Myanmar, high unemployment and ongoing violent insurgencies serve to exacerbate the problem.
Project Orchid, an initiative of the Gates Foundation, has been running targeted HIV interventions through local NGOs in these two states since 2004.

To evaluate risk behaviours among the IDU communities served by Project Orchid, polling booth surveys (PBS) were conducted in all 26 intervention sites across both states. Participants were purposively selected from a broad geographical area, and asked to anonymously answer questions through a ballot box.

In total, 558 IDUs in Manipur and 440 in Nagaland were sampled. They reported high rates of access to needles/syringes from Orchid projects (82% in Manipur and 96% in Nagaland). In both states, three-quarters had injected in the previous week. Among these, the mean weekly injection frequency was 11 times in Manipur and 5 in Nagaland. The proportion of injecting episodes using a clean needle/syringe was 77% in Manipur and 94% in Nagaland. Needle sharing in the previous month was reported by 38% in Manipur and 25% in Nagaland.

Manipur had less IDUs who had been sexually active in the previous week (46% versus 71% in Nagaland) but consistent condom use was lower in Manipur than Nagaland (30% versus 76%).

Higher rates of risky injecting and sexual behaviour were found in Manipur IDUs, which together with the much higher injection frequency and HIV prevalence of 28.65% underlines the need for continued behaviour change communication. Low injecting rates and moderate to high sexual activity among Nagaland IDUs indicates communication strategies should shift towards sexual risk behaviours.

34-1

Trends in Contraceptive Use and Determinants of Choice in China: 1980-2010

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In China, contraception is the most commonly used practice adopted by couples seeking to limit their number of children and to determine the time interval between births. Since 1980, the implementation of mandatory contraceptive strategy has reduced the fertility rate. Using large-scale data from national statistics and nationally representative sample surveys, the current study aims to assess Chinese trends in contraceptive use, and determinants of choice, from 1980 to 2010 among married couples aged 20-49.

Since 1980, national data on contraceptive methods utilization have been gathered by the National Population and Family Planning Commission of the People's Republic of China (NPFPC). Additionally, data from three roughly representative decennial samples, (1988, 1997, 2006), of Chinese women of childbearing age (15-49 years) have been gathered by the NPFPC, through the National Family Planning and Reproductive Health Surveys in China (NFPRHS).

A relatively stable Chinese mode of contraception has been established and maintained since the 1980s. This is characterized by long-term contraceptive use which is still dominant in current China. In addition, China's total contraceptive prevalence remains at the highest level across the globe from 1980 to 2010. However, the overall method composition of contraceptive use within China has changed since the mid-1990s. Over the study period, the use of sterilization increased from 30.21% in 1980 to 46.47% in 1994, and then declined to 31.7 % in 2010. At the same time, IUD usage increased, (39.83% in 1980 to 48.15% in 2010), as did oral contraception, (0.3% in 1980 to 0.98% in 2010), and condom usage, (2.35% in 1980 to 9.32% in 2010). The results from the multinomial logit model show that an individual's contraceptive choice depends not only on individual characteristics, including ethnicity, age, education level, household registration, region, number of living children, sex of the last living child, but also on the strength of family planning policies. A positive coefficient indicates that the looser the strength of family planning policies, the more likely the individual is to choose condoms or another short-term contraceptive method.

Long-term contraceptive use is still dominant in China. In fact, over the 30 year period, 1980-2010, and in comparative world perspective, China continues to have the highest total contraceptive utilization rate. Additionally, an individual's contraceptive choice is jointly influenced by the strength of family planning policies and individual characteristics.

34-2

Modern Contraceptive Use among Illiterate Women in India: Does Proximate Illiteracy Matter?

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In India, one out of every three women is still illiterate, according to the 2011 Census. Such women comprise a vulnerable section of the community. They are unable to participate in household decision making, including reproductive decisions. In many cases, they may even be unaware of available contraceptive methods. However, their lack of literacy may be compensated to some extent if their partners are literate. Contraceptive use of such illiterate women (referred to as proximate illiterates in development literature), may be higher than that of illiterate women whose partners too are illiterates (called isolate illiterates).

This hypothesis is tested using the third wave of the Demographic Health Survey data for India (2005-2006). The 39769 currently married illiterate women (comprising 32 percent of the sample) in the age group of 15-49 years are used for the analysis.

The study regresses whether respondents use modern contraceptive methods or not (CUSE), on a dummy indicating whether her partner is literate (PLEFFECT). In addition, variables like age of respondent, place of residence, socio-religious identity, economic status, employment status, place of delivery, etc. are used as control variables. Given the binary nature of the dependent variable, a logit model is used to examine the impact of proximate illiteracy on contraceptive use.

Results of the model

CUSE = a + b PLEFFECT + c Control variablesindicate that the proximate illiteracy effect is significant at the all-India level and for the rural population. To eliminate the possibility of omitted variable bias, we re-estimate the logit model for sub-samples formed on the basis of the important control variables. Although proximate illiteracy is still found to be significant, its effect is restricted to specific groups and communities.

A problem with literacy is that it is a very broad term including both those who can merely read and write and persons with higher levels of education (graduates, post graduates, etc.). Therefore, dummies representing whether the partner has completed primary level of education (PPEFFECT), and whether the partner has completed secondary level (PSEFFECT) are created. Two new equations

CUSE = a + b PPEFFECT + c Control variables
CUSE = a + b PSEFFECT + c Control variables are estimated for each of the sub-samples formed to test the proximate illiteracy effect. A comparison of the results for these two sets of equations with the earlier results (for proximate illiterates) reveal that increasing the partner's education level beyond literacy does not increase the strength of the externality effect.

An important implication of the findings is that the focus of family planning policies must be redirected towards the male partner. Results also indicate that it is necessary to develop alterative sources of reproductive knowledge among women.

34-3

Female Sterilization among Cesarean Section Women in Indonesia

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Female sterilization is one of Long Period Contraception Methods (LPCMs) known in Indonesia that can be performed right after the cesarean section, whether it is elective or emergency. Cesarean section cases increase steadily by 30%. National Family Planning Program in Indonesia intends to elevate the percentage of this method. However, the achievement is still very low at 3%.

Female sterilization is a permanent method of birth control by way of the fallopian canal is cut or tied, clamped, burned or disposed. The most effective method of contraception is sterilization and the procedure is done through minilaparatomy and laparascopy. Previous research indicates that the failure of this procedure is between 0.1% - 0.2% and depending on the operation procedure. Some women perform female sterilization during cesarean section delivery. Female sterilization usually done at the time of cesarean section delivery.

This research was conducted using retrospective cohort study design. The quantitative approach used to determine the relationship between cesarean section with female sterilization based on medical record data. Subjects were women who delivered by cesarean section (elective or emergency) and continue with female sterilization or not in Sardjito Hospital, Yogyakarta. The number of samples amounted to 102 people. Data analysis using : a) the univariate analysis, b) bivariate analysis and c) binomial regression with multivariate analysis.

Women who perfome female sterilization is 17%. The average age of women was 32.4 years. Furthermore, the age is categorized into two groups: <25 and >35 years and 20-34 years. Highest education level was high school (32%). Furthermore, educational level classified into high and low education. Percentage women who delivered by cesarean section who work as a housewife is the largest of study subject (57%). Number of children ever born vary from one child to six children. In general, women who perform the previous cesarean section were 38 women (37%).

Variables elective cesarean section was statistically and practically significant in the variable perform female sterilization with RR of 3.25. While other variables that have statistically and practically significant with the variable female sterilization are the variable age >35 years RR 3.83, parity >3 with RR 11.2, and previous cesarean section with RR 4.04.

Incidence female sterilization is higher in women who delivered by elective cesarean section compared with emergency cesarean section. Incidence female sterilization is higher in women aged >35 years, parity >3 children and previous cesarean section compared with women aged 25-34 years, parity 1-2 and did not do the previous cesarean section. Previous cesarean section proved become confounding variable on the relationship between cesarean section with female sterilization.

34-4

Determinants of Contraceptive Use among Women in Urban Slums of Pakistan

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This paper examined ever use of contraceptive methods in urban slums of six selected cities of Pakistan namely Sialkot, Mingora, Mansehra, Sukkur, Gilgit and Muzafarabad. This survey was conducted with the financial assistance from UNFPA, Islamabad and technical assistance of UN Habitat, Islamabad. A total sample of 2420 women was selected from low income settlements of abovementioned cities. Respondents of the study were ever-married women of reproductive age (15-49 years). Probability techniques were employed to draw above mentioned sample. Respondents were divided into “ever users” –women who had used some form of contraception at any juncture of their life point—and “never users” –who had not ever used. Use or non-use of contraceptives was further analyzed by formulating bivariate tables to examine various factors which seem to sway the usage of contraceptives.

Results of statistical analysis identified various factors as main determinants of contraceptive use: household income, watching TV by respondents, age and literacy status of women, and education level of husband.

Household income and watching TV were positively associated with contraceptive use. Similarly literacy status of women and their husband were also positively associated with contraceptive use. These findings corroborate with various findings of national surveys that strengthen the reliability and validity of the data.

34-5

The Use of Traditional Contraceptive Methods in a Northern Province in Viet Nam

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To examine the contraceptive practice, knowledge and attitude of traditional methods users and factors associated with the use of traditional methods.

We used bivariate analysis and multinomial logistic regression to analyze data from the population-based survey conducted in Thai Nguyen Province in 2011. 845 married women aged 18-49 were selected for this analysis.

81% of currently married women in Thai Nguyen used a contraceptive method and nearly one-five of these relied on traditional methods. Users of traditional methods had long duration of use (84 months on average) compared to modern users (71 months on average). Most traditional method users believed that their method was effective in prevention unwanted pregnancy (84.9%) and does not cause any side effects (92.6%), and they have very high satisfaction with their method (87.7%). All traditional users reported that they knew at least one modern method and a half of them have used modern methods previously. Regression analysis revealed that women received counseling from health workers before use (OR, 0.3) or those visited reproductive health services in the last six months (OR, 0.3) or those considered their contraceptive method to be effective (OR, 0.1) were less likely to use traditional methods compared to their counterparts. While women who considered their method to be safe were 5.3 times more likely to become traditional users. There was no significant relationship between the use of traditional methods with women's age, ethnic, education, marital duration and number of living children.

The study highlights that an increased focus on providing counseling from a health workers, promoting women's access to reproductive health services and improve their aware of safety and effectiveness of all methods is important to encourage more appropriate method choice.

35-1

Consistency of Educational Attainment in Explaining Unmet Need for Contraception and Excess Fertility in Three ASEAN Countries

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Increased availability of contraceptive services through the program and non-program sources has resulted in higher contraceptive prevalence rate (CPR) in developing countries. However, as more and more couples opt for smaller family size, unmet need for contraception remains considerable, with wide variations across socio-economic groups. Excess fertility is largely due to non-use of contraception to prevent or limit childbearing. The Demographic and Health Surveys (DHS) provide refined measures of unmet need. This paper utilizes data from DHS in Cambodia (2010), Indonesia (2007) and the Philippines (2008) to analyze the relationship between unmet need and excess fertility in these three countries, according to women's educational level, which varies widely across the three countries. The proportion of women with at least secondary education is highest in the Philippines (72.1%), followed by Indonesia (49.7%) and Cambodia (26.0%). Excess fertility, as defined in this paper, refers to women who have more children than their ideal family size.

The Indonesian family planning program is well known for its success, and the CPR now stands at about 55.4%. The Indonesian CPR is considerably higher than that of the Philippines (47.6%), and Cambodia, a later starter in family planning, with a CPR of 44.4%.

Unmet need for contraception is a function of the CPR, the proportion of women wanting to limit or space childbearing, as well as other reproductive behavior. The unmet need is lowest in Indonesia, at 9.2%, and highest in the Philippines (22.9%), with Cambodia in between (16%). The high level of unmet need in the Philippines corresponded with higher proportion of women with excess fertility (27.7%), as compared to 19.7% in Cambodia and 16.9% in Indonesia.

Scatter-plots show that in all three countries, unmet need and excess fertility are strongly positively correlated with educational level of the women, with a coefficient of determination ranging from 60.2% in the Philippines,83.5% in Indonesia and 99% in Cambodia. Among women with no schooling, unmet need for contraception and excess fertility ranges from 10.2% and 22% in Indonesia, to about 30% and 40% respectively in the Philippines. In contrast, there is no consistent pattern in the relationship between unmet need and excess fertility across other socioeconomic variables such as ethnicity, religion and wealth index. The predominance of the educational variable in explaining the differentials in unmet need and excess fertility is further vindicated in logistic regression.

The analysis shows the importance of improving women's educational level to enhance their reproductive health and rights, as well as family wellbeing. Further research is needed to explore the underlying reasons for the high level of unmet need and excess fertility in the Philippines, despite the higher educational level, as compared to Indonesia and Cambodia.

35-2

Does Quality Matter? An Examination of Quality of Care and Contraceptive Use among Urban Women in Uttar Pradesh, India

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Declining fertility rates and increased use of contraceptives are thought to be associated with quality of family planning services. Yet there is little empirical evidence to support this linkage. Furthermore, little is known about the impact of service quality on contraceptive use in urban settings, a fast growing population in India. Previous studies have identified associations between overall or average quality of services and individual contraceptive use. Yet no studies to our knowledge explore the linkage between an individual woman's contraceptive use and the quality of services offered at her preferred facility.

The objective of this study is to explore whether high quality of care in preferred health facilities is associated with increased probability of use of modern contraceptives among urban women in Uttar Pradesh, India. For the purposes of this analysis, quality will be defined using a framework of six elements (Bruce 1990). In this analysis, we measure choice of methods, information given to clients, client-provider interpersonal relations, and appropriate constellation of services.

Baseline data were collected in 2010 for the Measurement, Learning and Evaluation project; 17,643 currently married women were interviewed in six cities of Uttar Pradesh, India. Women reported background characteristics, contraceptive use, full birth history, reproductive health outcomes, and fertility preferences. Respondents also provided the name of their preferred facility for a range of services: family planning, antenatal care, child health and reproductive health. Facility surveys, exit interviews, and provider interviews were carried out in the preferred facilities; indicators of quality were then constructed from these facility-level data. We account for clustering of observations within facilities using robust standard errors. We analyze data on 11,111 women who match to one or more preferred general health providers for last visit in last year; 3,718 women who match to the provider who carried out their sterilization, and 4,033 women who match to the last source for their current family planning method.

Preliminary findings indicate that women in urban UP were more likely to use modern contraceptive methods if their preferred facility offered integrated services and well-trained service providers. Our analysis will explore whether women who identified high-quality facilities were more likely to use a long-acting permanent method than those who identified lesser-quality facilities, and whether this varied according to the type of method. We will also analyze whether distance travelled varies according to quality of care (using above mentioned aspects of care), or type of method.

Our findings will show whether elements of quality of care are associated with increased probability of current contraceptive use in urban India. Successful policies and programmatic interventions designed to increase contraceptive prevalence in this setting will include a focus on improved integration of FP with other services and regular training of providers.

35-3

How Acceptable are Injectable Contraceptives: Evidence from India

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While injectable contraceptives have been approved for commercial sale by the Drug Controller General of India and are available with doctors' prescription, they are not yet provided in contraceptive method options in the Reproductive and Child Health (RCH) program of India. Unfortunately, the political controversy and concerns about their appropriateness for Indian women has limited its wider use. Evidence on the experiences of women adopting injectable contraceptives in India is relatively sparse. What is available suggests high rates of discontinuation and menstrual disturbance, accompanied by high rates of acceptability. Other issues, such as reasons for discontinuation, method switching to and from injectables, preferences regarding injectables compared with other methods, relative experiences with different contraceptives, and quality of service, have been infrequently addressed thus far. The paper highlights evidence from a research study that examines women's experiences of using injectable contraception in-depth, their perspectives on its acceptability, as well as on discontinuation and switching, side-effects, quality of care, including whether counseling and information were comprehensive, with appropriate follow-up, and factors posing obstacles to injectable contraceptive continuation.

Using a retrospective study design, we interviewed 376 currently married women who had initiated injectable use in the 12-15 months prior to the interview and obtained information on their experiences prior to and following method acceptance. Calendars were used to assess women's experiences both in the period following the adoption of injectables, and for the 12-15 months preceding injectable adoption. The study was undertaken in selected facilities of four NGO service providers in Bihar, Jharkhand, Maharashtra, Madhya Pradesh and New Delhiselected on the basis of the volume of injectable clients who adopted the method during 2010, using data available from clinic records.

Data analysis is on-going. Preliminary findings indicate that while 28% of women took three or more doses, 19% returned for the second dose and 52% had taken only one dose. However, even though discontinuation rates were high, all women indicated that they found injectable contraceptives a convenient method to use. A quarter of the respondents indicated that the best features of the injectable method were the ease of use of the method, the extent to which it permits women themselves to control their fertility, and the fact that the method did not require daily use. Reasons most commonly reported for discontinuation included irregular menstruation (39%), heavy bleeding (22%), and adverse effects on health (35%); Difficulties in accessing a facilities were, in contrast, cited as an obstacle to repeat doses by a minority (8%).

Findings are encouraging and suggest that women find injectables an acceptable method of contraception. With appropriate counselling, it is possible to upscale this and include the method in the basket of contraceptive choices offered in the RCH programme.

35-4

Contraceptive Switching in Pakistan

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In order to implement the family planning program, it is important to know how people use contraceptive methods, how well these methods work, what problems they have and what they perceive of them. This paper analyses the data to study contraceptive behavior after discontinuing a method, particularly switching from one method to another. There have been many studies about contraceptive use prevalence but little is known about the contraceptive use-dynamics. The latest Pakistan Demographic and Health Survey 2006-07 indicates stagnation in contraceptive use at 30%. Despite no notable increase in the CPR, 'ever use' of family planning methods has increased during the past decade to 49%. The difference between the proportion of ever users and current users is evident from the high contraceptive discontinuation rate in Pakistan at 45%. These figures underscore the practical importance of studying the behavior of Pakistani couples after discontinuing a contraceptive method and their relevance to an understanding of the ability of couples in a country like Pakistan to achieve their reproductive intentions.

To examine the contraceptive switching rates and compare those who discontinued contraception and switched to another method with those who discontinued to a non-use by whether they were advised about the possibility of switching at the time of method adoption.

The data is derived from the FALAH (Family Advancement for Life and Health) project baseline survey of the 29 districts across Pakistan. FALAH is a USAID funded five-year project to diversify family planning services in selected districts of Pakistan. The sample size is 17,124 women, which is almost double the sample size of the recent PDHS 2006-07. This is a unique data in Pakistan that uses standard Demographic and Health Surveys format to collect information on monthly contraceptive history of women. Analysis is based on 11,003 episodes of contraceptive usage by women in 4 years prior to the survey. Single and multi decrement life table analysis was performed. The multivariate analysis will be performed using multinomial discrete-time hazard regression models.

Preliminary Findings

- Twelve month switching rate was only 12%. This shows that out of those who discontinued, only a quarter switched to another contraceptive.
- Only a quarter of the couples were advised about the possibility of switching from their method at the time of method adoption (24%).
- More than two-fifths of those who switched from a method did so because of the side effects (43%).
- Half of the modern contraceptive users switched to less effective traditional methods.

The results of this study will help to reinforce the major but much neglected problems of inadequate contraceptive switching to alternative methods in the family planning program of Pakistan.

36-1

De Jure and *De Facto*: Demographic Characteristics of Rural Migrant and Minority Communities on the Thai-Myanmar Border

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The Access to Care (ATC) project is being conducted in a rural area of northwestern Thailand on the Myanmar border. The area has a great diversity of ethnic groups and large numbers of international migrants. After conducting a household census and receiving informed consent we conducted interviews in the language of choice of the respondents.

Respondents (total 961) include women who had one or more children in the 5 years prior to survey, and the woman's husband if the couple remained co-resident.

Residents of the same ethnicity within the same minority communities include Thai citizens and recent international migrants from Myanmar and China. The ATC research design thus allows comparisons between communities of different ethnic groups (predominantly Chinese, predominantly Lahu and predominantly Northern Thai communities) within the same area, and between international migrants from Myanmar and China and non-migrants of the same ethnic group living in the same communities. Age and sex composition, religion and ethnicity of the entire population are available from the census data, along with responses to questions on current household composition. These answers allow quantification and discussion of characteristics of the population according to individual's legal status (citizen, non-citizen legal migrant, non-legal migrant) and allow identification of *de jure* population (individuals who were recorded on household registries) and *de facto* population (individuals who were currently living in the household who had moved out at time of our census, and where and why they had moved).

Survey data include information on education, Thai language ability, literacy in other languages, use of family planning, use of antenatal care, self-rated health and constraints to access to health services.

Age distributions of the ethnically differentiated sub-populations show important differences associated with differences in rates of use of family planning indicated in survey data. Results are analyzed in relation to ethnicity, citizenship, age and gender of the people who moved out. Out-migration rates range widely in different communities, along with differences in reasons for migration, and destinations.

Implications for differences access to and use of health services are described in relation to migration patterns and other demographic characteristics of the sub-populations.

36-2

Migrant Values and Beliefs: How Are They Different and How do They Change?

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This is a study of the values of migrants. We examine processes of selection-how values affect migration-and adaptation-how migration influences value changes. Empirical analyses use a unique collection of data that combines detailed information on values and beliefs from a representative sample of non-migrants in Nepal with a representative sample of Nepali migrants living in the Persian Gulf. Results suggest that migrants were selected from those who were less committed to religion and historical Nepali values, but more family-oriented. In terms of adaptation, our results are consistent with the idea that migrants become more religious, less committed to historical Nepali values, and change ideas about family-orientation in mixed ways. Thus, we find that value adaptations of migrants are complex processes that could have immense impacts on ideational diffusion around the world.

36-3

The Cost of Immigration for Asians in the United States

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Before Asian-Americans became known as the "model minority," they were considered "undesirable" aliens undeserving of U.S. citizenship and excluded from owning land and property. With the passage of the Chinese Exclusion Act in 1882, Chinese immigrants were barred from becoming naturalized U.S. citizens. The 1924 Immigration Act forbade Asians from entering the U.S. In 1934, the Tydings-McDuffie Act limited the Filipino immigration quota to 50 persons per year. But in 1966, Asians were dubbed the "model minority" to reinforce the "Black American" problem during the height of the Civil Rights movement. Alluding to the "success" of Asian Americans, a December 1996 article in *U.S. News & World Report* bluntly stated, "At a time when Americans are awash in worry over the plight of racial minorities, one such minority is winning wealth and respect by dint of its own hard work-not from a welfare check."

But "success" may only be skin deep. Past studies have indicated that Asian earnings are lower than those of Whites at the same levels of educational and occupational prestige. Moreover, Asian Americans are "less likely to turn human capital into social capital." It appears that there is a tear in the "model minority" image and the much touted "success" of Asian Americans.

Using the 2007-2009 American Community Survey (ACS)[1], this research will investigate which Asian group have "made it" in American society. With the use of multivariate analysis, this study will explore the factors associated with "success" or lack thereof among Asians. Two economic indicators, income and poverty status, will be examined. Specifically, this study will determine the following:

- the effect of place of birth and immigration status on the economic attainment of Asians;
- comparative returns to education by a variety of contextual variables including demographic, socioeconomic, and geography.

A preliminary analysis of the data shows disparities in median personal and household income among different Asian groups, with Asian Indians having the highest median income. Compared to US born Asians, immigrants do not benefit from higher education, especially if this was obtained prior to moving into the US.

[1] The US Decennial Long Form that collected the socioeconomic characteristics for a sample of US residents every 10 years has been discontinued after the 2000 Census. It has been replaced by the American Community Survey (ACS). The ACS, which was implemented nationwide in 2005, is an ongoing survey that provides socioeconomic data every year for geographic areas with populations greater than 65,000.

36-4

Rules in Change? Births, Migrations, Cohort Replacement and Homeostasis in World Population: 1950-2100

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Are migrants replacing "missing" births? We discuss the actual relevance of "replacement migration" in the context of the low and lowest low fertility levels that have emerged in Europe, and subsequently in South-East Asia during the 1990s. After a short introduction on this highly debated topic, we take an empirical perspective with a specific emphasis on birth-cohort replacement migration and working-age population replacement migration. We examine the actual dynamics of the absolute population numbers by birth cohort (independently on the place of birth) in some low fertility, highly developed countries, and we also look at ageing indicators. Subsequently, we investigate more in depth the case of a prototypical lowest-low fertility country, Italy. We conclude that (some) replacement migration is actually taking place, but that the extent varies according to the country.

37-1

The Impact of Remittances on Socio-economic Development in Rural Bangladesh

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International remittances sent back to the homeland by migrant workers have an enormous impact on the economic growth and poverty reduction in developing countries. Remittances also serve as an important source of foreign exchange reserves for developing countries. In a handful of developing countries, remittances from emigrants account for more than 10 percent of the GDP. Bangladesh is the fifth highest remittance-earning country in the world. In 2005, 6.0 percent of the GDP in Bangladesh came from remittances. Data on remittances originate primarily from two sources: information collected by central banks and published as part of the balance of payments statistics, and information from sample surveys among remittance senders. These surveys can be used to understand how the patterns of remittance transfer and expenditure are associated with other characteristics such as the behavior of remittance senders and receivers. The findings can also be useful for examining the social and micro-economic dynamics of remittances and to assess the importance of unrecorded transfers in total flows. The purchase of basic consumption goods, housing, education, and health care have been identified as the main uses of remittances by households in recipient countries. In wealthier households, remittances can provide capital for small businesses and entrepreneurial activities.

The impact of remittances may vary between and within the developing countries. There have been a lot of studies to examine the impact at the national level but none has scrutinized the impact within the country. This paper examines the impact of remittances within the country and on the rural-urban differentials in Bangladesh. Our analyses will concentrate on identifying the following: (1) the proportion of the remittances that is used for basic consumption goods, housing, education and health care; (2) the proportion that is used for capital investments; and (3) the proportion that is used for loan payments

37-2

Changing Immigration Policies and Its Impact on Migration in Sultanate of Oman

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The six states of the Gulf Cooperation Council (GCC); Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and United Arab Emirates (U.A.E.) which has over 5 million migrant workers have some of the highest concentration of migrant workers in the world. According to the International Migration Report(2002) top four countries with the highest proportion of migrant stock are in West Asia i.e. United Arab Emirates (74%), Kuwait (58%), Jordan (40%) and Israel (37%). As per World Migration Report (2003), 25% of the workers in Saudi Arabia, 65 % in Kuwait, 67 % in United Arab Emirates and as much as 70 % in Qatar are immigrants. Most of these migrants belong to South Asian countries like India, Bangladesh, Pakistan and Sri Lanka. During last twenty years, increasing proportion of non-nationals to total population in Gulf nations is considered as growing dependency on foreign labor force as well as one of the root causes behind unemployment. Countries like Saudi Arabia, Oman, U.A.E., Baharain have come up with new policy of reserving jobs for their own nationals known as the localization of labor. The present paper attempts to analyze the phenomenon of localization of labor in the context of international migration in Oman. The present study is primarily based on the analysis of secondary data made available by Govt. of Oman. This secondary data is supplemented by primary data in the form of key informant interviews and exploratory interviews of expatriates and Omanis. Exploratory interviews of migrants shed light on economic influence of the policy, interviews of locals (Omanis) helped to understand socio-cultural traits of the Omani community. Key informants were selected from Omani as well as Asian community closely associated with Omanisation process.Oman's development policy includes 'Omanisation Program' as an attempt to reduce local unemployment and dependence on foreign labor through various strategies like enhancing socio-economic standards of national population through educational and vocational training and reservation of jobs for nationals. Current localization policies in Gulf countries play a key role in deciding future international migration trend. Due to the new immigration policy, expatriates will be welcome in selective areas from selective countries restricting the flow of migration to Gulf countries.

37-3

Aspirations and Plans of Second Generation Non-Nationals in Kuwait

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For the last several decades, more than half of Kuwait's population has comprised of non-nationals. In 2010, non-Kuwaitis constituted 68.2 % of the total population (PACI, 2010). Among all non-Kuwaitis, 17.3 % were born in Kuwait, a majority (80 %) of whom were Arab while 18 % were Asian. About 46 % of the Arabs and one-quarter of the Asians born in Kuwait have lived here for 20 or more years. This group comprises the 2nd generation of migrants whose parents came to the country at least 20 years ago.

Kuwait, like other GCC countries, defines migration as a temporary phenomenon governed by strict rules and regulations to manage the mobility of workers, some of whom are allowed to bring in their families depending on the worker's salary. However, a substantial proportion of Kuwait-born persons have been living in the country as foreigners even though this is the only country where they may have resided most of their lives.

Even though Kuwait does not have a policy to nationalize foreigners born in the country, several research questions are important to understand the realities and implications of the presence of 2nd generation migrants in the country. Two important reasons for studying this group are as follows: (a) Information on the achievements, aspirations and plans of the 2nd generation non-nationals may provide insights to build future scenarios of population growth and population mix in Kuwait; (b) In case Kuwait decides to revise its policies pertaining to the legal status of Kuwait-born foreigners and begins to offer long-term residence for this group, information on its human capital attributes, socioeconomic status, and perceptions about the country would provide useful insights to decision makers. Such an analysis may or may not, however, be generalizable to the other GCC countries.

Given the above background, the overall aim of this study is to assess the educational and occupational achievements of 2nd generation non-nationals, and analyze their future aspirations and plans. Arab and Asian non-nationals will be compared throughout this analysis

The paper will be based on focus group discussions with Asian and Arab males and females. Data collection with four such groups is being planned.

Definition of 2nd generation: A person (male or female) aged 15 or more born in Kuwait to non-Kuwaiti parents and has lived in Kuwait most of his/her life is defined as a member of the 2nd generation.

37-4

Trends in Socio-economic Achievement of Filipinos in the United States

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Based on the 2000 US census Filipino-Americans are the second largest group of Asian in the United States accounting for 24 percent of the total Asian population. They are also one of the fastest-growing Asian American ethnic groups. From a population of roughly 20,000 in 1920, mostly concentrated in Hawaii, the number of Filipinos in the United States grew to more than 2 million in 2000, 48 percent of whom were in California. Movement of Filipinos in the United States has been broadly classified in two waves. The first wave consisted of predominantly male agriculture workers with low level of education whose entry to the US started around early 1900's to the start of World War II. The second wave was largely composed of professionals who entered the US after the 1965 amendments to the US immigration law. It is now hypothesized that there is a third wave of Filipino migration to the United States. However, unlike the earlier waves, where migration was selective of specific occupation groups, the third wave lacks this occupation-selectivity and is more heterogeneous in terms of composition. This paper aims to examine changes in the socioeconomic composition and achievement of Filipinos in the United States from 1960 to 2005 using census data and assess whether this third wave of migration exists. It will focus on education, occupation, and income of Filipino Americans and compare them with whites and other Asians ethnic groups. Results reveal that Filipino migrants in the US who arrived in the 1980's onwards tend be clerks and service workers unlike in earlier periods where migrants are predominantly professionals. Moreover, the education profile of Filipinos in the US greatly improved over the last four decades. In 1960 only 8 percent of Filipino Americans had university education; this increased to 49 percent in 2005. From 1960 to 2005 the proportion of Filipinos with university education was almost comparable with that of other Asian groups and even exceeded that of the whites. Meanwhile, the proportion of Filipinos working as professionals likewise increased from 8 percent in 1960 to 19 percent in 2005. In contrast, the percentage working in elementary occupations steeply declined from 26 percent in 1960's to 2 percent in 2005. However, despite the improving education and occupational status of Filipinos in the US their average income is still relatively lower compared to the whites and other Asian groups like Japanese, Chinese and Indians.

38-1

Prenatal Sex Selection in Albania Compared with Asia

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The analysis of the rise in the sex ratio at birth has long been restricted to Asian. But Albania is probably the most blatant case of prenatal gender bias observed in Europe and is also surrounded by countries where sex imbalances at birth seem pronounced. Levels ranging from 110 to 115 male births per 100 female births have been observed during the last decade. Available quantitative and sociological evidence remains, however, fragmentary and often indirect.

This paper analyses the main features of the rise in the proportion of male births in Albania by drawing comparison with better documented cases of sex selection in East and South Asia. We examine in particular the role played by fertility decline, government policies, socioeconomic and political change, access to modern reproductive technologies, and the main aspects of son preference and local patriarchal systems. We observe that the major intermediate variables are similar in Albania as in Asian countries where sex selection is common. Yet Albania also presents several distinctive features. Specific factors such as the role of international migration and the long absence of public and policy response make it a case apart.

We draw for this study from the statistical analysis of several recent social and demographic surveys as well as from civil registration and census data.

38-2

The Gender Gap from Asia to Europe: Recent Estimates of the Missing Women

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Our paper proposes an estimation method of "missing girls" in today's world based on the latest United Nations population estimations (WPP 2010). We will first discuss respective impact of prenatal and postnatal discriminations on gender imbalances. We can also identify a dozen of countries in Asia and Europe where imbalances should be prevalent. We present the results of our estimations for 2010 and for previous and future periods. Results show in particular an increase of "missing girls" during the last decades. We can also distinguish the specific role played by imbalanced sex ratio at birth caused by prenatal sex selection and by excess female mortality linked to girl child neglect and infanticide.

This work is based on existing national statistics as well as recent population estimations from the United Nations.

38-3

Prenatal Sex-Selection among the Asian Diasporas in Western Countries

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This presentation gives an overview of quantitative evidence of prenatal sex-selection against females within the Asian Diasporas in Western Countries and a more detailed insight into the evidence among the Indian Diaspora in the UK. The paper includes new results of an ongoing research analysing the most recent trends in the Asian Diasporas in the UK. The findings may provide some argument for a weakened(/weakening) son-preference among the Indian Diaspora. The paper further discusses what can be learnt from the Asian Diasporas to better understand prenatal sex-selection against females and identify policy options.

38-4

High Level of Sex Ratio at Birth in the Three Caucasian Countries: Why doThey Stand Apart from Neighboring Ones?

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During the 1990s, sex ratio at birth increased considerably in the three Caucasian countries. In the most recent years, levels have remained abnormally high in Armenia and Azerbaijan and show erratic trends in Georgia. Analysing data from official statistics and recent demographic surveys, we confirm the persistence of a high sex ratio in these three countries and discuss possible explanations of the phenomenon. Although quite different, especially in their ethnic composition and religion, these countries share common characteristics: a son preference, a relatively low fertility, an easy access to abortion and to knowledge of the sex of the fetus at an early stage of pregnancy. The combination of these features could explain why they stand apart from neighbouring countries in terms of sex ratio at birth.

40-1

Patterns of Migration during Armed Conflict: A Risks, Resources, and Responses Model

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This article is a theoretical and empirical study of migration during armed conflict. The primary objective is to begin to address systematic variability in migration during conflict at the micro-level and develop some insights into why some people migrate away from conflict, while many people who are exposed to the same macro-level violence do not. Building on theory from the literatures on migration and forced migration, the theoretical model developed in this study uses key sociological principles to disaggregate the conflict-migration relationship into several steps. It considers differentials in risk, or the factors that increase threat for some people but not for others. It also considers resources, or the social, economic, or political assets that some people can mobilize to mitigate the risk that they face. Differentials in both risks and resources combine to influence the likelihood that an individual will migrate away from an armed conflict.

Empirical testing of the theoretical pathways through which risks and resources moderate migration during armed conflict is based in the Chitwan Valley of Nepal during the recent Maoist insurrection. A unique combination of data, including records of violent events and a prospective panel survey of individuals, make possible the direct empirical documentation of relationships between conflict, individual characteristics, and migration. Results show that people with key economic assets, such as land and livestock, were more likely to migrate following major gun battles. Land and livestock can increase risk and serve as resources by creating opportunities for migration. Alternately, high caste decreased the likelihood of migration, indicating support for the hypothesis that people might actively use social status as a resource to mitigate threats and thereby decrease the necessity of migration.

This study and the risks, resources, and responses model contribute two general implications to the study of demographic and social change. The first is that people who have fewer social and economic resources might have fewer behavioral choices with which to react to periods of difficulty. Arguably, it is the package of opportunities for behavior, not a simple lack of agency that drives behaviors. The second implication is that micro-level population behaviors, such as migration, can have key unintended consequences that might be as important as the intended consequences of conflict designed by macro-level actors. For example, in the case of Nepal, although the conflict was initiated by the Maoists to address inequalities in the social and economic distribution of resources, evidence from this study suggests that the conflict might have perpetuated existing inequalities by creating a situation to which those with more resources were better able to cope. Thus, careful consideration of micro-level circumstances, vulnerability, and resources can lead to very different predictions than analysis solely based on macro-level policy intentions.

40-2

The Adaptation of Second-Generation Afghan Refugees and Immigrants in Iran: Patterns and Its Socio-Demographic Correlates

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Iran, as one of the main destination of immigrants and refugees, has hosted around three million Afghan migrants and refugees in recent decades. The long-term settlement of Afghan immigrants along with their young age structure and high fertility, have produced an important shift in the composition of their population with the emergence of a "second generation"(born in Iran from at least one Afghan-born parent, and also including those immigrated to Iran during childhood).
This paper aims to examine how the second-generation Afghans have adapted to the host society and to what extent their adaptation patterns have correlated with their socio-demographic characteristics.

The data is drawn from the survey on 'Adaptation of Second-generation Afghan Youth in Iran' which was conducted in Tehran and Mashhad in 2010, and covered 520 Afghan youths in the two cities.
Results have shown that the second-generation Afghans have a variety of orientations to their adaptation process in the Iranian society. These different patterns, based on Berry's framework, have been described in terms of assimilation, separation, integration, and marginalization (ASIM). Integration is the most prevalent pattern of adaptation and acculturation (35.8%). The second pattern is separation which is seen among 33% of the respondents. The third pattern, assimilation, is observed among 17.1% of the respondents, and the fourth pattern, marginalization, is seen among 14% of the respondents. Given the diversity of adaptation strategies, our multivariate analysis revealed that several socio-demographic factors are significantly associated with different patterns of adaptation. These factors include gender, education, ethnicity, perceived discrimination, family context (Household Socio-Economic Status (SES), and duration of family residence in Iran), neighborhood characteristics (SES and ethnic composition), and city context. The implications of these findings for policy are discussed.

Key word: Adaptation, Second-generation, Refugees, Forced Migration, Afghans, Iran.

40-3

Perspectives on Forced Migration in India: An Insight into Classed Vulnerability

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Forced migration can be defined as the movements of refugees and internally displaced people as well as people displaced by natural or environmental disasters, chemical or nuclear disasters, famine, or development projects. Forced migration is a complex and persistent set of phenomena. The problem of forced population displacement is not new and seems likely to remain one of the greatest challenges for India in the foreseeable future.

Objectives:

1. To study the forced migration, environmental health related migration and other migration by different demographic, social and economic classes in India and thereby to examine the classed differentials in relation to forced migration.
2. To explore forced migration in details by examining its different types, i.e., natural disasters (draught, flood, tsunami etc.) induced forced migration; social and political problems (riots, terrorism, political refugee, bad law and order etc) induced forced migration and forced displacement by different developmental projects.
3. To find out the vulnerable socio-economic classes mostly affected by forced migration.

The 64th Round of National Sample Survey conducted during July, 2007 to June, 2008 has been utilized in this paper.

Migrants have been categorized into three different categories – *forced migrants, environmental-health related migrants and other migrants* – based on their reasons of migration. Migrants reporting "natural disaster", "social / political problems" and "displacement by development project" as their reasons for migration, have been categorized as "forced migrants. Bivariate distributions analyses with Pearson chi-square tests and binary logistic regression model have been used in the present study.

The findings of bivariate and logistic regression analyses clearly exhibit that there is a clear classed differentiation among forced migrants in India. Specific classes are significantly associated with forced migration. Females, children and elderly are found to be mostly displaced as a result of forced migration. Minority religious groups like Muslim and other religious groups (for example, Buddhist, Sikhs etc) are also prone to be victims of forced migrations. Marginalized social classes like scheduled caste and scheduled tribes are also likely to become sufferers of forced migrations. Poor people are most likely to be affected by this kind of migration.

Regional analyses of forced migrants show that there is a need to consider region specific forced-migration policy. The tribal states in India are mostly affected by developmental projects related forced migration. This may have impact on the social cohesion of this region and it may also affect the social rest in the country.

No doubt, that in India, the distribution of forced migrants across different demographic and socio-economic groups clearly recognizes it's classed patterns, and hence raises the issue of classed vulnerability associated with it. Policies should be aimed at these population considering different regional dimensions of forced migrations.

40-4

Barriers and Enablers to Reproductive Health Service Provision in Three Crisis Settings in the Asia Pacific

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Priority reproductive health care, as outlined in the Minimum Initial Service Package (MISP) for Reproductive Health, forms a minimum standard in humanitarian health service delivery. Despite significant advocacy efforts over the past 15 years, including endorsement by WHO and other key international bodies, the life-saving services of the MISP have not been fully implemented in a crisis to date. This qualitative research study explores the key enablers and barriers to MISP implementation in three settings: Burma (cyclone 2008), Philippines (typhoons 2009) and West Sumatera (earthquake 2009).

95 aid workers and 105 displaced persons were interviewed through semi-structured interviews, key informant interviews and focus group discussions. Six health facilities were assessed using pre-existing, inter-agency data collection tools. Observation of health service provision and coordination mechanisms was undertaken. Document review and analysis of published and gray literature was conducted. A constructivist grounded theory approach was applied to the three case studies.

Key enablers included strong leadership, robust peer or collective accountability, risk-taking, locally driven coordination mechanisms, adequate funding and emergency preparedness training. Barriers included competition among agencies, lack of “champions” for reproductive health, misunderstanding of health standards, ineffective coordination, lack of sustainable funding, and dearth of meaningful accountability mechanisms.

Findings demonstrate that competitive, technocratic approaches to MISP implementation are often limited. Locally driven responses which cultivate leadership, collaboration and peer accountability may be more effective. This has meaningful implications for advocacy, training, coordination and program design related to reproductive health in emergencies.

42-1

Women's Employment Exit and Re-entry around Childbearing in Indonesia

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Female labour force participation has been increasing in Indonesia with the expansion of export-oriented industries in the 1980s as well as the booming of informal sectors especially around the economic crisis. Even though their labour force participation rate (LFPR) has increasing, Indonesian women seem to not having a steady participation across their life cycle. The age-specific of females LFPR in 2007 National Labour Force Survey shows females has a relative fluctuated pattern across age compared to males. Indonesian women's participation in labour market seems also to be constrained by their familiar roles as it is showed in the lower rate of married-females LFPR compared to the unmarried as well as previous studies that found marital status and presence of young children as significant determinants of women's non-participation. However, different studies found that women tend to be continuously working even during childbearing stage especially with the presence of extended families and domestic helpers providing child-care while mothers are working.

This paper tried to answer whether marriage and childbearing affect women to leave the workforce and if so, whether being in the later family-stages affect women to reentering the workforce. It analyzes life histories data from Indonesian Family Life Survey (IFLS) 1993, 1997, 2000 and 2007, using a discrete-time event history method. First part of analysis focuses on the effect of transitioning into first marriage and first birth on working women's likelihood of leaving the workforce. The second part focuses on the effect of number of children on the likelihood of the women who were off from the workforce to reenter into the workforce. Both time-variant and invariant variables such as age, education qualification, migration status, urban-rural residence, live in java or non java island, status and occupation of the last job are included. The sample is women who had a complete life history aged less than 49 years old or were born between 1960-1989.

The preliminary findings show that transitioning into first marriage and birth is the strongest and positive determinant of women to leave the workforce, even after it is controlled by education and last job's characteristics. Having higher education, being a migrant, had previous job as sales or service workers, and in formal sectors tend to force women to have an employment break, while living in urban areas and in Java Island seems to help women to stay in the workforce. Meanwhile women with 2 and more children tend to permanently off from the workforce, and surprisingly, women with higher education are less likely to reenter once they had an employment break. Previous job characteristics are not significant predictor in determining the likelihood of women to reenter the workforce.

42-2

Measuring Vulnerability of Adolescents in a Urban Slum in Delhi

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India's urban population is estimated to double by 2030, and growth is expected to be fastest in poor urban slums. This rapid urbanization process has been characterized by both a large proportion of youth and considerable poverty among urban residents. Indeed, almost one-fifth of India's population comprises adolescents aged 10-19 and every fourth person residing in urban areas is estimated to live below the poverty line. Emerging evidence suggests that the urban poor are vulnerable in many ways and disparities in education, health and basic amenities between the poor and the non-poor in urban areas are wide. This paper aims to shed light on the unique vulnerability of urban adolescents, the nature of risks they face and the factors that facilitate and pose obstacles to good health among poor urban adolescents.

Data are drawn from the WAVE (Wellbeing of Adolescents in Vulnerable Environments) study, conducted in a slum area of Delhi, as part of a larger multi-city study conducted in six countries. Insights will be presented from the qualitative phase of the study in which 20 Key Informant Interviews with key stakeholders, 8 Community Mapping and Focus Group Discussions with adolescents aged 15-19, a participatory Photo-voice activity with 10 adolescents, and 20 in-depth interviews with adolescents were conducted. Data were collected on all aspects of adolescents' life - their education, health, access to health services, community and family influences on their health, safe spaces, work opportunities, sexual relationships and future aspirations.

While data are currently being analysed, preliminary findings confirm that adolescents in urban slum communities do face multiple vulnerabilities. Adolescent girls faced huge restrictions on their mobility; boys on the other hand were free to move around the community and outside . Girls reported a lack of safe spaces, concerns about their personal safety, and problems of teasing and harassment by young men, while boys reported such concerns as community and family level violence, consumption of tobacco products, alcohol and drugs from an early age, lack of job opportunities etc. Both boys and girls reported limited access to health services was limited, particularly in the area of sexual and reproductive health. Finally, evidence suggests that notwithstanding the social and cultural restrictions on boy-girl friendships, adolescent boys and girls do form relationships with the opposite sex. Gender differences in adolescents' lives were stark and visible: indeed, even access to and use of modern technology, such as mobile phones and the internet, were much higher among boys compared to girls.

Findings reaffirm the vulnerabilities of the urban poor adolescents, and make a strong case for programmes that will enable them to make safe transitions to adulthood and connect them to appropriate health information and services.

42-3

Parent-Child Communication on Sexual and Reproductive Health Matters in India: Perspectives of Parents

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Although there is evidence from around the world that parents matter, and that supportive communication between parents and children enables young people to make a safe transition to adulthood, evidence of the extent and content of parent-child communication on sexual and reproductive matters in India remains slim. This paper aims to fill this gap by presenting evidence, from the perspectives of mothers and fathers, on the extent to which they communicate with their sons and daughters about sexual and reproductive matters, and the obstacles they face in doing so.

The *Youth in India: Situation and Needs 2006-07* study included, along with a survey of youth in six states, in-depth interviews with parents. Mothers and fathers were selected purposively and were drawn from purposively selected villages and urban wards located near those selected for the survey. A total of 412 parents - 209 mothers and 203 fathers - were interviewed. Interviews were wide-ranging and included the extent of communication with their children on sexual and reproductive matters.

Communication with sons and daughters on sexual and reproductive matters was very limited. Where it existed, it was largely restricted to mothers informing their daughters about the mechanics of menstruation-"use of the cloth" and dos and don'ts of appropriate behaviour during menstruation. Both mothers and fathers described a range of factors that inhibited such communication. Most often cited were cultural norms that made it unacceptable for parents and children to discuss sexual and reproductive matters. Many reported that parents in their setting did not discuss sex, pregnancy or infection with their children. A second leading factor inhibiting communication, also closely associated with cultural taboos, was discomfort and embarrassment: parents reported that they were too shy to speak to their children, and alternately, that their children were too shy to speak to them. A third leading reason was parental perception that youth today became aware of these matters on their own through interactions in the school setting, through television and books, through friends, and less often, through the more traditional providers of this information, that is, family elders, older siblings and/or sisters or brothers-in-law. A fourth factor, expressed by a few parents but perhaps underlying all of those described above, were concerns that communicating about matters relating to sex would be perceived by young people as a license to experiment with sex.

Findings highlight the limited communication between parents and children on sensitive matters and call for measures that will reduce the obstacles both parents and their daughters and sons face in doing so.

42-4

Lifecourse Urbanization and Health Outcomes among a Cohort of 87,134 Thai Adults

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Rapid urban growth has occurred in many parts of the world affecting urban housing, sanitation, transportation, and the environment. This transformation is largely driven by rural-urban migration and has profound implications for the health and well-being of the population.

This study examines the influence of urbanization on household structure, social networks, and health in Thailand. We compare lifetime urban or rural dwellers and those who were rural as children and urban as adults. Data derived from a large national cohort of Sukhothai Thammathirat Open University adult students residing throughout Thailand (N = 87,134). For analysis, we report Odds Ratios (OR) and 95% Confidence Intervals based on multivariate logistic regression.

We found the rural-urban group, one-third of cohort households, was significantly different from other groups (e.g., smaller households). The rural-rural and the urban-urban groups often were the two extremes. Poor self-assessed health was prominent in the urban-urban group (OR = 1.30, 95% CI 1.17-1.43) and the rural-urban group (OR = 1.21, 95% CI 1.11-1.32). Other important covariates also included low social trust (OR = 2.07, 95% CI 1.92-2.23), regular alcohol drinking (OR = 1.85, 95% CI 1.57-2.18), and being divorced/separated or widowed (OR = 1.33, 95% CI 1.11-1.60). Depression was associated with the urban-urban group (OR = 1.24, 95% CI 1.11-1.40) and the rural-urban group (OR = 1.12, 95% CI 1.01-1.24); other important covariates included low social trust, being divorced/separated or widowed, belonging to the lowest income group, and smoking. After adjusting for other covariates, hypertension was not significantly associated with urbanization groups but it was influenced by older age and drinking.

Urbanization transmits the sociogeographic changes that are associated with transitions in both health behaviours and health outcomes. This highlights the importance of urbanization as a mediator of the health-risk transition underway in Thailand.

43-1

Lifetime Pregnancy and Contraceptive Usage among Women Living in Low Fertility Regions of Iran

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This paper aims to describe lifetime pregnancy and contraceptive usage among cohorts of women in reproductive age living in low fertility regions of Iran. For the first time in Iran, the 2005 Iran Low Fertility Survey (ILFS) collected information on the full history of women's contraceptive use, that is, for every month of their life from the time that they married. A total of 5526 women were successfully interviewed in four selected regions including Gilan, Isfahan and Yazd provinces and the city of Tehran. Data on pregnancy history and contraceptive practice were obtained from a chart recording pregnancy history and its detailed outcomes, and episodes of contraceptive practice and the reasons for stopping each episode, covering the years preceding the survey since first marriage for each woman. This approach allows collection of contraceptive use across the reproductive lives of the sampled women. These data provide important insights into the changing fertility behaviour of successive generations of ever-married Iranian women.

Using the ILFS data, descriptive analysis is used to investigate the duration of lifetime use of contraception by examining the status of a woman at each month of her reproductive life from 1980 onwards. It addresses such questions as what contraceptive methods were used by successive generations to stop their childbearing after they had achieved the number of children that they wanted to have, what methods were used to achieve the remarkably long intervals between the first and the second birth and what methods are being used in the emergence of a delay of the first birth within marriage. The paper also highlights associations between lifetime contraceptive usage and individual and interpersonal risk factors. It examines to what extent factors such as urbanity, parity or education explain the choice of a specific method and the duration of its use at each stage of the reproductive life course. We found that women in the 1980s marriage cohorts were more likely to be pregnant or not using contraception in the first five years of their marriage, while, 1990s marriage cohorts have spent a considerable time protecting against pregnancy in the same period. While the methods used were varying across regions, in total, there was convergence across time in the proportions using any method. The paper concludes that contraceptive using lifetime approach in studying contraceptive dynamics provide a valuable information for the role of contraception in women's reproductive behaviour which would be useful in the evaluation of - and implementation of efficient family planning programs.

43-2

Cambodian's Individual Destinies in the Midst Of Development: Demographic Dynamics in a Life Course Perspective

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Few countries have experienced so much political and social upheaval as Cambodia during the three decades spanning from 1970 to 1998. This period encompassed civil war, the Khmer Rouge Genocide, American bombing, starvation, and the transition of four successive governments. Today, Cambodia is attempting to reconstruct itself while modernizing at the same time. Fast and challenging changes are at play in a context of rapid socioeconomic development as an increase in age at first leaving school, first leaving home and age at first marriage and a decline in fertility rates and marital stability. Thus, the timing and sequencing of transition markers to adulthood have changed simultaneously through short-term fluctuations due to modernization and long-term trends stemming from its chaotic past.

In this paper, we will focus on firstly characterizing socio-demographic changes and their impact on the transitions to adulthood that have taken place in life courses of young Cambodians since 1998. Secondly, focusing on individuals' life courses, we will explore the individual and family variables behind the change during the last decade (1998-2008). Indeed, major transitions such as leaving home, changing family structure, and entries into first union and motherhood vary amongst cohort, socioeconomic and demographic characteristics of the individuals. The increasing variability in those pathways to adult roles takes place on the interplay between the capacity of individuals to seize opportunities (agency) and social macrostructural limitations (norms). In order to measure the variability of those pathways we will identify both typical and atypical trajectories and analyze the destandardization of individuals' trajectories when they first left home to the birth of their first child. Using the new "R" software, a sequential analysis of transition rate between two structure modalities will be conducted. The probability of changing trajectories due to a demographic event or socioeconomic background will be calculated. And a study comparing the different transition matrixes as two different birth cohorts (i.e members with genocide experience or younger cohorts) will be undertaken.

Analysis of life course transformation and structural evolution requires longitudinal data over an extended period of time. In this article we will essentially focus on data from the Mekong Island Population Laboratory (MIPopLab). The MIPopLab empirical database is a longitudinal survey. It is a demographic-surveillance system launched in December 2000 in an island located in a province surrounding Phnom Penh. This database is updated twice yearly and concerns about 12,000 people. Event panel data such as marital union/disruption or remarriage, in/out migration, death of a member or birth history are available and individual variables (i.e age, sex, marital status, socioeconomic situation, etc.) are known. Those variables allow us to analyze in a life course perspective all individual destinies in the midst of development.

43-3

Population Diversity as a Feature of the Life Course: Census-Based Measures Compared Across Asia

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This paper applies Theil/Entropy measures of heterogeneity or diversity to examine the degree to which populations converge or diverge with respect to a set of marker statuses known to be associated with progress through the life course. More conventional statistical summaries of the life course are in terms of means to describe either the composition of populations on variables of interest or the mean timing of occurrence of events governing those marker statuses. The typical analysis focuses on one marker variable or considers many marker variables but one at a time.

The proposed analysis expands the range of life course measurement to include the somewhat neglected dimension of variation or heterogeneity. Research into cohort diversity levels, mainly Euro-American (but on Southeast Asia see Nahar, Xenos and Abalos under review, *Annals of the American Academy of Political and Social Science*) indicates how cohorts pass through a stage of high heterogeneity in a set of marker variables during the early-adult ages). Entropy (Theil) measures take advantage of the very large samples provided in national census micro-files. Supplemented at times with other census data, we will draw on the present IPUMS library of 32 Asian census micro-files representing 11 countries and years spanning 1970-2009. The census data source places limits on the scope of the analysis (only the most basic marker variables such as schooling, marriage and living arrangements are included), but also provides opportunities for extensive refinement (to single years of age for example) as well as disaggregation to population sub-groups such as urban versus rural residences. Another important dimension, rarely provided in the data usually used for such analysis, is languages or ethnic groups. For several of the available countries and dates, it is possible to estimate life course timing and heterogeneity throughout the life course for each of many language or ethnic groups. The Entropy index has the desirable feature that it can be summed across population sub-groups, across levels of geographic aggregation, and across sub-sets of marker variables. This allows a consideration of which marker variables are the most important sources of heterogeneity at each age and sex and each age-segment of the life course.

The paper illustrates the following: effective comparative use of the harmonized IPUMS data files for Asia; use in life course analysis of the Theil/Entropy indexes of heterogeneity; and the multivariate analysis of variation in entropy/diversity levels across categories of ages (in single years), sex, country and census year, as a means to isolate country differences and changes over time. All of these can be important well beyond studies of the life course.

43-4

Age Decomposition of the Gain in Life Expectancy at Birth due to Specific Cause Elimination in Sistan& Baluchestan Province, Iran

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Often expectation of life, and in particular expectation of life at birth, is considered to be a summary measure of mortality. Hence, differences in expectation of life are considered to be indicators of changes in mortality. In this study the difference in life expectancy at birth is considered as gain in life expectancy after specific cause elimination.

This study aims to evaluate the Age-specific contribution as decomposing changes in life expectancy at birth of the elimination in major cardiovascular diseases (CVD), malignant neoplasm (MN), accidents, Gastrointestinal Diseases and Respiratory diseases mortality to the gains in life expectancy observed during a year, as well as to calculate the completeness rate for the collected death as a partial work for the estimation of mortality rate over age 5.

Mortality data from Death registration system operated by office of statistics and informatics, Health Deputy, Zahedan University of Medical Sciences were analysed by the Brass's growth balance method to adjust level of completeness in mortality data for those aged over 5 and the methods of decomposition of changes in life expectancy at birth (United Nation, 1985) as well as the partial cause elimination method of multiple-decrement life table techniques.

Coverage rates of death recorded by registration system for males and females were 0.91 and 0.667 respectively when; this rate for both sexes was 0.79.

The gain in life expectancy at birth had the highest values (male, 5.94 and female, 5.39) due to CVD elimination and followed by accident (male, 2.48 and female, 1.07). Respiratory disease placed in the third rank (male, 1.1 and female, 1.14).

The gains in life expectancy due to these causes elimination for both sexes were 5.65, 1.82 and 1.1 years in the given order.

The highest contribution for specific-age group to these changes in life expectancy at birth after CVD elimination was for the last age groups in the population (1.2 years) and two gender sub-population (1.4 and 0.9).

In the case of accident, the highest age contribution value attributed to the age group (25-29) for males of 0.33 years and the age group (55- 59) for females of 0.11 years and age group (25-29) for both sexes of 0.21 years.

The increased years as gain in life expectancy at birth after respiratory diseases elimination decomposed by various age groups, the highest contribution was for the last age group of 0.175 years for all population and for males and females were the last age group and age group(70-79) of 0.183 and 0.169 years respectively.

The findings of this study provide useful information which could contribute to a more effective allocation of resources for research activity and public health programmes

44-1

Provincial Probabilistic Population Projections: The Example of Pakistan

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Pakistan faces today unprecedented population growth entailing a large population of schooling age, and low levels of economic development, with increasing spread of poverty and unemployment over the past few decades. The uncertainty of demographic variables at provincial levels particularly internal and international migration renders sub-national population projection more difficult. The uncertainty of the demographic future for provincial level is therefore vital element in any sub-national forecast. Currently, the deterministic approach is utilized to project the sub-national population which fails to address the issue of demographic uncertainty. Probabilistic population projection models have the potential to overcome these shortcomings, but these models have often been implemented at national level. This paper applies the probabilistic population projection technique at provincial level to presents the first comprehensive set of projections and associated uncertainties for Pakistan. It is first attempt to implement the probabilistic population projection model based on expert- opinion and using bottom up approach at provincial level for Pakistan. The paper sets out the projection framework at regional level, outlines the approach adopted for each demographic parameter and their assumptions, and presents the probabilistic forecasts for 2010-2060 for national and provincial level of Pakistan. The initials result shows that there are 33 percent chances that population of Pakistan will start to decline in 2060. The 80 percent prediction interval shows that Pakistan population in 2060 will be between 244.8 and 364.4 million. The greater uncertainty exists about the demographic future of provincial level compared to national level.

44-2

Marriage in Uncertain Times: Human Capital, Social Change, and Marriage Outcomes in China

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Low fertility, high sex ratios, and later marriage in China have combined to create a large population of unmarried adult males. In order to compliment studies of consequences, this paper attempts to estimate the scale of non-marriage in light of China's demographic dynamics. An increasing share of the Chinese population is attaining secondary and post-secondary education. I show that marriage and fertility rates in China are responding to greater bargaining power on the part of women due to education and female scarcity in ways that will affect the patterns of marriage. I propose a novel agent-based model of marriage decisions, which can estimate the extent of marriage delay for males and females, period shares never-married, and possible tempo effects on the total fertility rate. China‟s present marriage squeeze is related to historical experience and contemporary trends in China and East Asia generally.

44-3

Rural Out Migration at the Household Level

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Migration, an important part of demography, is least studied as compared to fertility and mortality. Due to decreasing birth rate and death rate, migration (internal or international) has become a more important concern for demographers and other social scientists. Moreover, there is a need to pay more attention on deriving simple and realistic models for analyzing and explaining demographic behavior and its prediction in future. A household, being a basic socio-economic unit for the integrated rural development, its characteristics play a vital role in decision of its members to move or not to move. In fact, micro-level studies have important implications for housing policies and also for the development of other sociological models related to families and communities.

The aim of this paper is to study the pattern of rural-out migration at the micro level through some probability models. Data for this study has been taken from a sample survey entitled “Migration and Related Characteristics – a Case Study of Eastern Bihar” conducted during October 2009 to June 2010.

Under certain assumptions, modifications and estimation of parameters involved therein, it was found that inflated geometric and inflated logarithmic distributions satisfactorily explain the pattern of rural out migration from the study area at the household level.

45-1

Comparison of Infant Mortality and Under-Five Mortality Estimates by Alternative Methods

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In last two decades, two of the large scale population based surveys in India, namely, the National family Health Surveys (NFHSs) and the District Level Household Surveys (DLHSs) has bridged the data gap in key demographic and health indicators at sub-national level. While the NFHSs provides the key monitoring reproductive and child health indicators such as antenatal care of pregnant mothers, institutional deliveries, immunization of children, contraceptive use and unmet need for contraception at state level, the DLHSs provides such estimates for state and district of India. Though these surveys provides the estimate of infant mortality and under-five mortality for states of India using the birth histories (direct estimates), such estimates at district level are not generated owing to sample size constraints. Often the need for Infant mortality, under-five mortality and life expectancy at birth in districts of India are needed for various purposes. For the districts of India, these estimates are estimated using the children ever born and children surviving (indirect method) as suggested by Brass. The UN MORTPACK is largely used in deriving the such estimates. It uses Palloni-Helingman Equation and UN South Asian pattern life tables in deriving the estimates. Though these estimates are derived and used, less is known on the reliability of such estimates. The objective of this paper s to compare the estimates of IMR, U5MR and life expectancy using two alternative methods, namely estimates derived using CEB and CS (indirect method) and that of direct method. We consider the estimates derived from SRS as standard. Results indicate that the indirect estimates derived using the children ever born and children surviving tend to over- estimate the infant and childhood mortality. Hence there is a need to adjust such factor to derive the close estimate of child hood mortality. We have developed an adjustment factor and derived the estimates for sample districts of India.

45-2

Refining Population Cencus Data Based on Life Table

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Death is one among three demographic components that can affect the change in population besides fertility and migration. Information about the death is highly demanded by Government and Private in terms of economic and health policy program. Information about the death rate can be used to draw up a projection of populations and other indicators, which in turn may be put in planning and evaluating development in education, health, housing, services insurance and other fields. The death rate can be obtained directly (direct method) based on the population or indirectly (indirect method) through the demographic techniques and statistics based on the censuses or surveys data. Data of death rate can be used as basis in drafting death table (life table). Currently, the system of population registration (civil registration) of Indonesia has not yet been possible to procure accurate data of death rate. Therefore it is necessary to conduct a study of preparation of life table which is not too dependent on the data of death rate. An approach that can be used is by leveraging survival ratio. This paper presents the results of the preparation of life table survival ratio in Indonesia with a population approach during 2000-2010, an evaluation of population of Indonesia in 2000 and evaluation of population growth rate of Indonesia during 2000-2010.

45-3

A Comparative Assessment of the Short and Extended Questions on Disability: Evidence from the 2007 Philippine Longitudinal Study on Aging

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The 2007 Philippine Longitudinal Study of Aging (PLSOA) dataset is a nationally-representative sample of older persons in the Philippines which collected a range of health issues including functional disability. Functional ability was measured using the Activities of Daily Living (ADL) and Instrumental Activities of Daily Living (IADL) indicators. In the study, respondents were asked a set of core and extended questions to measure their level of functioning. Extended questions aimed to measure the degree of difficulty experienced which could depict a more detailed picture of a person's level of functioning.

This paper aims to compare the validity of using the short (or global) and extended forms of measuring disability by analyzing changes in the level of disability when a global question is used versus a series of detailed questions. The analysis will consist in comparing the answers to the short set of questions with the extended set and compare if the short questions were good enough to identify people with disabilities in the investigated domains (sex, age and education categories).
Findings of this analysis will be useful for assessing the census data, among others. Starting in 1990, specific items to measure disability were introduced in the Philippine Census. However, the results of the 1990 and 1995 censuses show very low estimates compared to independent sources of disability statistics. In the 2010 census, a new set of disability questions were included to measure functional disability. Results of the study hopes to provide some basis for assessing the accuracy of the reported level of functional health data collected in the 2010 census which employed a global question to measure functional ability.

46-1

Indirect Estimation of Overall Changes Residence in Asian Countries

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Population mobility or migration is a demographic event that involves both spatial and temporal dimensions. These lead to diversity and complexity of the employed measures of migration, especially for cross-national comparisons. In the spatial dimension, it is differences in statistical geography that prejudice comparisons, because the number of migrants recorded in any form of data collection is fundamentally dependent on the number and shape of the units into which a territory is divided. One approach can be applied is to compare countries with respect to all moves, irrespective of distance. In practice, however, relatively few countries collect such data. Bell (2005) identified just 37 countries for which it was possible to compute a migration intensity figure which included all moves. A recent study (Courgeau, Muhidin and Bell 2011) has proposed an indirect estimation for all moves in some countries. Using the same concept applied in Courgeau et al. (2011), this paper aims to estimate all moves in some Asian countries.

46-2

Can the Simplified Heligman-Pollard Model Mortality Schedule be fitted to the Grouped Data?

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There are two principal approaches in studying age pattern of mortality. One is to examine statistical relationships between age-specific death rates or other indicators such as ${}_nq_x$ or e^0_x at different ages from available sets of age-specific death rates or life tables and use these relationships to arrive at age patterns; various Model Life tables are based on this approach. The other (and older) approach is to represent the age-specific death rate as a function of age using a parametric model. Such a representation may be very useful for several purposes in demography and in actuarial science. Mathematical representations express age-specific death rates of a single population as an algebraic function of age.

The most comprehensive work in the recent years on the law of mortality has been done by Heligman and Pollard (1980). This involves an 8-parameter model which has been found to fit reasonably well to various mortality experiences and hence is being extensively used in mortality studies. However, the model contains a very large number of parameters and estimating these becomes difficult when the age-specific death rates are in a grouped form. This becomes a major issue for most of the developing countries which give the death rates in quinquennial age groups to avoid random fluctuation of estimated probability of dying and also to reduce systematic errors due to over- and under-statements of age and age heaping. Although some methods are available for estimating the single-year age-specific mortality from data given in groups of ages, each of them has its own drawback.

In the present work, an attempt has been made to fit the Heligman-Pollard model without de-grouping the grouped data. The advantages are that the modified model effectively requires estimation of only a limited number of parameters (five) and hence can be fitted to grouped data on age-specific death rates.

The simplified model has been fitted to the data on age-specific death rates, in five-year age groups by sex obtained from the Sample Registration System (SRS) of India and its major states for the period 1970-2000. In addition, the simplified model has been tested to the grouped data for various periods of other developing countries viz., Sri Lanka (1980-82), Mexico (1983-85) and Venezuela (1950-51).

Applications show that the fits of this five-parameter version of the Heligman-Pollard 8-parameter model are considerably close to the empirical mortality data for-India and its major states. Though the model fits for the other developing countries are not as accurate as that of the eight-parameter model, they are also fairly close to the empirical mortality data. The evaluation of the method on Indian mortality data shows that the technique proposed can be efficiently applied to period mortality data for India.

46-3

Potential Applications of Dynamic Microsimulation Models in Demographic Projections

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Microsimulation modelling approach is widely used as a tool for analysing distributional impacts of policy interventions. Most dynamic microsimulation models developed for socioeconomic policy analysis incorporate demographic elements to a varying range. The use of the demographic components is often limited to providing a demographic base for other socioeconomic analyses. Their potentials in supplementing and strengthening traditional methods of population projections as well as their ability to providing independent demographic projections are rarely explored. This paper discuses capabilities and challenges in using dynamic microsimulation models for the purpose of conducting long term projections of populations, families and their social characteristics. It illustrates the benefits dynamic microsimulation models can offer over traditional methods of population projections such as cohort component methods and discusses the ways they can complement each other to enhance the usefulness of these projections. Examples are drawn from the Australian Population and Policy Simulation Model, a dynamic microsimulation model. This model uses a one per cent sample of the 2001Census as the starting microdata and produces annual snapshots of Australian population through to 2050.

46-4

The Estimation of Non-Marital Childbearing in Thailand: Pattern and Trend during 1996 to 2010

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Pregnancy and childbearing in younger women is increasing in Thailand. It is now an issue of social and health to be concerned, especially for those who are not married. The numbers of non-marital childbearing are not known yet. So, this study aims to estimate the numbers of non-marital childbearing as well as the changes in pattern and trends.

The estimation in this study is based on the concept that if marital fertility rates are multiplied to women in reproductive aged, the excess number of registered births comparing to these marital childbearing will be the number of non-marital childbearing. According to this concept, marital fertility rates are reassessed from national representative fertility or reproductive health surveys and then apply to registered population of the year 1996 to 2010.

47-1

Domestic Migration, Remittance, and Contraceptive Use in India

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This study examines the association between migration and contraceptive use, as well as the mediating effect of migration and increased household income through remittances in influencing the adoption of contraception in India. Data from the India Human Development Survey (2004-2005) are used to ascertain patterns of contraceptive use for migrant and non-migrant households in different regions of India. Results indicate that households with a migrant have significantly higher contraceptive use than households without a migrant- whether analysis is separated by geographical or fertility region. Economic change or additional income is a by-product of migration that has important implications on contraceptive use depending on level of fertility at origin: In the low fertility regions (TFR at or less than 2.1), some remittance is associated with lower contraceptive use, while in the intermediate fertility region (TFR between 2.1 and 2.7), high remittance amount is associated with increased contraceptive use even after controlling for spousal absence. Family planning programs targeted at increasing contraceptive use among women must thus consider the importance of migration and diffusion of ideas in influencing contraceptive decisions. Given that additional income may be associated with higher contraceptive use, there should also be a push to create income opportunities, particularly for women, to encourage more contraceptive use and reduce fertility. Future studies should account for the potential influence of accumulated wealth, and how it manifests itself in family decisions regarding optimal family size.

47-2

Testing Convergence Hypothesis for Fertility in India: An Inequality Adjusted Assessment

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Over the last four decades, the progress in fertility decline in India is remarkable (Registrar General of India, 1971-2009). Notwithstanding its possible determinants, fertility decline may tend to follow assumed theoretical patterns regarding current and near future fertility scenario, which may emerge to be a period of 'convergence'. In India, there has been no formal attempt to estimate the volume and speed of convergence across the Indian states and socioeconomic groups. India being the second largest populous country with huge geographic and socioeconomic variations provides an ideal setting for testing convergence hypothesis. In this paper, we first estimate convergence among averages of fertility rates across states and socioeconomic groups of India. Second, to overcome the recent criticism on convergence estimates based on averages alone, we have modified existing econometric models for adjustment of inequality (relative distribution) in convergence estimates and weighted these estimates to population proportion of the states and social groups.

Data and Methods

We used secondary sources of data: Sample Registration System (SRS; 1971-2007) and three rounds of National family health survey (NFHS; 1992-2006) to assess the fertility trends and convergence across the major states and socioeconomic stratum. Population totals and literacy rates from Census of India (1971-2011) and percentage of population below poverty line from National Sample Survey Organization (NSSO) various survey rounds are also used. The convergence in fertility was estimated based on the average fertility rates of states and socioeconomic groups using absolute and conditional β convergence estimates. The convergences in overall absolute and relative inequalities in fertility rates were estimated based on percentage reduction in Absolute Dispersion Measure of Fertility (ADMF) and Gini Coefficient.

Results

The estimates of absolute beta convergence for TFR across the states and socio-economic group suggest evidence of divergence hypothesis. However, the analysis based on piecewise (after breaking into smaller periods of observation) suggests a fluctuating trend of convergence and divergence during the four decades of 1971-2008. Conditional beta convergence estimates, after inclusion of additional covariates (aggregate socio-economic status of the states in terms of female literacy and poverty levels into the model) are confounded with absolute beta convergence estimates. However, the percentage reduction in Absolute Dispersion Measure of Fertility (ADMF) support convergence hypothesis. On other note, the Relative Dispersion Measure of Fertility (RDMF) provides evidence to support divergence hypothesis.

Conclusion

Overall, the convergence estimates based on averages alone show mixed results for different periods. Population weighted absolute dispersion measures show evidence of convergence but relative dispersion measure show evidence of divergence. The time shifts in convergence and divergence in fertility rates in India can be attributed to population policy shifts and socioeconomic changes in India. Recent divergence can be attributed to increasing focus on RCH programme.

47-3

An Investigation into the Trade-Off between Economic Disparity and Fertility Differentials in West Bengal: A District Level Study

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Available evidences suggest that the regional disparity in socio-economic development had widened at national and sub-national level in India. On the other hand, though many states of India has experienced substantial decline in fertility during last two decades, the level of fertility remains unacceptably higher in many parts of the country. Moreover, it is evident that the inter-district economic disparity has increased in West Bengal. Though the state of West Bengal has experienced substantial decline in fertility, it lags behind in terms of socio-economic development. Hence, the main purpose of this paper is to examine the extent of economic disparity and fertility differentials among districts of West Bengal.

The economic disparity among the districts is examined with respect to differentials in monthly per capita consumption expenditure (MPCE) and household wealth index. The data from 61st round of National Sample Survey (NSS) of India conducted during 2004-05 has been used to compute MPCE for each district. The economic disparity among the districts is also examined by using two inequality measures namely; Theil index and Hoover coefficient.

The household wealth index for each district is computed using a set of economic proxies (household wealth and assets) from District Level Household Survey of 2007-08 (DLHS-3) of India through principle component analysis (PCA).

The differentials in fertility among the districts are examined with respect to total fertility rate (TFR) in three periods of time namely; 1991, 1997 and 2006. The estimates of TFR for 1991 and 1997 are borrowed from published sources. The TFR for 2006 is derived using the data on birth order statistics from DLHS-3 through regression method.

The ordinary least-square regression analysis is carried out to understand the factors associated with fertility change in districts of West Bengal.

Results indicate that the performance in terms of economic indicators (MPCE and household wealth index) was not uniform in all districts of West Bengal. The fertility estimates indicate that in West Bengal the estimated TFR for the period 2006 was 2.4 compared to 2.0 of Sample Registration System of India for the same period. Out of 19 districts of West Bengal, 5 districts reached the below replacement level of fertility (less than 2.1), three districts reached the replacement level of fertility (TFR of 2.1) and 11 districts had TFR between 2.2 and 4.0. Moreover, the pace of decline in fertility was not uniform in all the districts. The regression analysis indicate a weak association of economic variables but a strong association of age at marriage and contraceptive use with fertility change in districts of West Bengal.

47-4

Social Exclusion of Women in Pakistan: Some Lessons for Population Policy

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The paper is based on the household survey conducted by first author on Social Exclusion of Women in Pakistan. Primary data for this study was collected from five villages and one urban community through administering individual survey questionnaire. The data were gathered by interviewing 622 ever married women in both rural and urban areas in Kasur and Lahore district of Punjab respectively. This paper focuses on the socio-economic determinants of social exclusion of women living in rural and urban areas of Pakistan. It was assumed that social exclusion of women is prevalent and is based on dominant-subordination relationship of men and women. Various factors play their role in determining this dominant-subordination relationship that further influences level of social exclusion of women. Social exclusion was measured by taking into consideration level of participation of women in main socio economic stream of life. Seven indicators were identified to measure level of social exclusion of women namely; age at marriage, household income, consultation in decision making process, political participation, participation in religious activities, and access to health services and right to cast vote. On the basis of measurement respondents were categorized as socially excluded and not excluded

Results of statistical analysis showed that there was significant association between education of husband, occupation of husband, household income and social exclusion of women in Pakistan. With the increase in level of education of husband, level of exclusion of women decreases. White collar jobs of husband are negatively associated with social exclusion of women. Similarly high level of household income results in low level of social exclusion of women.

48-1

Fertility Transition in Districts of India, 1991-2011

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Fertility transition in India is of global significance not only due to it size of population but regional diversity in the level of socio-economic development. By 2008, about half of the states of India has reached the replacement level of fertility while the four larger states of India, namely, the states of Uttar Pradesh, Bihar, Madhya Pradesh and Rajasthan continued to have unacceptably higher fertility. Demographic research in last two decade have extensively focused on the determinants of fertility change at micro level and less at aggregate level (state or district level). While the large scale demographic health surveys, such as the District Level Household Survey has bridged the data gap in reproductive and child health indicators, it does not provide the fertility and mortality estimates owing to sample size constraints. With limited resources and emphasis on decentralized planning such estimates at district level are essential for effective program implementation. Moreover, we hypothesize that even within the state districts are not uniform with respect to fertility behavior. Accordingly, the aim of this paper is to examine the fertility transition in districts of India in last two decades.

We have estimated the CBR using data on population in the 0-6 age group from census of India 2011 using the reverse survival method and derived the TFR from the estimated CBR. Given the volume of work for 640 districts (as of 2001 census), we have used the published estimates of CBR and TFR for 1991 and 2001. While the estimates of 1991 are borrowed from the census of India estimates, such estimates for the year 2001 are taken from the estimates of Gulimoto and Irudiyarajan. The fertility transition is assessed with respect to change in total fertility rate (TFR) in last two decades. Maps are prepared and the fertility estimates of each districts are marked. We have used the log linear regression equation to understand the factors affecting the two of the proximate determinant of fertility, namely the contraceptive use and the age at marriage. The set of socio-economic variables such as female literacy, percentage of population living below poverty line, percent urban, caste, religion and region are used as independent variables. Results indicate that the pace of decline in fertility is not uniform across districts of India. There is large variation in fertility level even among the backward states of Uttar Pradesh, Jharkhand, Chhattisgarh and Rajasthan. While women's education attainment, caste, religion and sex preference significantly affect the fertility, poverty is not significantly related to fertility change.

48-2

Recent Trends in Fertility in Cambodia

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Data on fertility in Cambodia are available with greater frequency since 1990, but they were scanty before that period. Because of the unsatisfactory vital registration system in Cambodia, indirect techniques are employed to estimate fertility and mortality in the country. This paper describes the evolution of fertility in Cambodia after the Khmer Rouge period, estimated mainly by using indirect techniques on available information, and examines the most recent trends in fertility in the country. Alternative estimates based on more appropriate indirect techniques are presented and discussed for the most recent periods. In spite of a clear declining trend in fertility in Cambodia, it has not been possible to estimate the exact speed of the decline because of lack of consistency between different sources of data. This paper attempts to reconcile the various results using new approaches. The paper also examines the consistency of the recent fertility estimates in relation to the proximate determinants of fertility and attempts to explain the decline in fertility in spite of a low prevalence of contraception among married women. The paper also proposes the collection of additional data in order to substantiate this explanation and to derive alternative estimates of fertility.

48-3

Fertility Estimates from Syrian Vital Registration

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The analysis of the fertility transition in Syria allows us to distinguish several phases. The first phase was when fertility reached world records, and resisted any change. Followed by the phase of rapid decline in the mid-1980s, and lastly by a phase of slow decrease or a phase of quasi-stagnation in fertility. Despite the interest to represent more accurate estimates of recent Syrian fertility levels and trends, very few studies have been devoted to this question. This paper addresses this issue by trying to review and analyze trends in fertility over the last three decades.

The objective of this paper is to provide a continuous series of fertility rates estimated by the same method for the entire period studied to better follow fertility trends in Syria.

The data used in this work are essentially those of vital registration which remained a long time without appropriate exploitation due to their deficiency and imperfection. In fact, in the published vital registers there are two categories of births in a calendar year, the births that occurred during the calendar year and the births which occurred in previous years but they were recorded during that calendar year.

To estimate fertility using vital registration data, several adjustments must be made. First, we must determine the number of births that actually occurred in the year of recording, and then we must correct the births on the basis of survival probabilities till the age of registration to take into account the deaths of children occurred before that age. Thus, we obtain the actual births each year. However, since the births registered are not broken down by age of mother, this distribution is estimated based on the age-specific fertility rates observed in national surveys. The numbers of women at each age in each year were estimated based on the 1960, 1970, 1981, 1994, 2004 census using the intercensal growth rates.

The series of total fertility rate obtained allow us to trace and analyze for the first time the single year movements of fertility over a long period from 1959 to 2005. The results indicate that Syria's total fertility rate declined by 47 % between the early 1960s and the mid-2000s falling from around 8.5 to 4.4 births per woman. However, the examination of fertility trends based on birth registration confirms that fertility stalled in mid transition.

48-4

Fertility Transition in India: Decomposing the Effect of Change in Marriage, Residence and Educational Composition

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Fertility transition is currently underway in India with 10 Indian states have already achieved it and six more nearing the replacement level of fertility. Empirical research in European countries suggests that change in marriage pattern plays a significant role in demographic transitions. In India, although marriage is nearly universal and the proportion of never married female population at the end of the reproductive period is negligible, occurrence of marriage has been delayed substantially. This is evident as the proportion of never married female population is constantly increasing over the years, particularly in female population groups like urbanites and higher educated. Given this backdrop the present work examines the contribution of the changing pattern of marriage to the change in fertility over the years. The research will also estimate the contribution to the change in fertility due to the change in the composition in place of residence and educational attainment of women.

The research is based on the first and third rounds of National Family Health Survey (NFHS) conducted in 1992-93 and 2005-06 respectively. The survey covered 89777 ever married women in the age group 15-49 in NFHS-1 and 124385 in NFHS-3. We used the proportional decomposition method (originally suggested by Kitagawa in 1955 and later modified by Rutherford and colleagues in 1981) to estimate the contribution of change in marriage and marital fertility towards the reduction of total fertility rate (TFR). Place of residence and educational attainment of females was also considered in the analysis to understand the contribution of compositional changes of these two variables on the TFR.

The TFR was found to be 3.39 in NFHS-1 and 2.68 in NFHS-3 in India. Decomposition analysis suggests that 29% of the decline in TFR in India can be attributed to the change occurred in marriage pattern. Further, controlling for place of residence stratified by educational status revealed that compositional changes in rural-urban residence increased TFR between 1992-93 and 2005-06. However, at the country level and for 13 Indian states contribution of compositional changes in educational status within place of residence have helped in reducing fertility levels. Further, 14% of the decline in TFR can be attributed to the compositional changes occurred in educational attainment of females. Controlling for compositional changes in place of residence and education, the change in marriage pattern contributed 13% towards the decline of TFR between 1992-93 and 2005-06.

The current research suggests that change in marriage pattern has contributed significantly in the fertility decline, though the magnitude of contribution reduced when controlled for the compositional change of education and residence. Parallel to developed countries, in Indian context also the delayed age at marriage is important in curbing the pace of fertility decline.

48-5

Is Fertility Transition Accelerating or Decelerating? An Evaluation of Family Planning Program in Bihar

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Several Indian states have achieved the replacement level of the fertility, and very close to goal. Bihar has been moving slow towards replacement level fertility. All family planning targets was one of the major changes that took place under the current RCH approach since 1997 for population stabilization, But the first years of TFA (1996-97) reveals that Bihar is a traditionally poor performing state. Our study revisited the Target Free Approach (TFA) under family welfare program and examined how far the Integrated Family Planning (IFA) and RCH services have worked to bring any noble changes in performance of the program in Bihar. The family planning expenditure increased twelve times during 1985-86 to 2005-06 but total fertility rate and effective couple protection rate (CPR) have been practically stalling since 1997. Morovere it found that inconsistencies in the linkage between effective couple protection rate and total fertility rate during post TFA. The annual per cent rate of decline in total fertility rate has declined to half of that in pre-TFA period. Contraceptive Prevalence Rate has increased by background characteristics but total fertility rate has decline only among urban, muslim and other caste. The Gompertz curve shows plotted for Product of change in total fertility rate and time on the level of total fertility rate shows a curvilinear relationship. Gompertz curve is evident with the product change of total fertility rate around 6 to 7 the fertility decline was more in pre 1997, which was stagnant with stagnation in product of changes around 5 in post 1997 and drastically dropped to 1.8 in 2007. That's why the basic question lies in the mind of researcher is that when the most of the states were experiencing the rapid fertility decline, why the state of Bihar shows stagnation in fertility decline in recent period? The reason could be that the period 1997 is the landmark in the history of family welfare programme in India. Hence there is needed to look at all those programs associated with population stabilization effort.

49-1

Life Course Effect of Risk Factors at Women's Birth on Their Subsequent Reproductive Outcomes: A Pseudo-Cohort Analysis in 47 Developing Countries

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Every year about 8 million children under five die, with more than 95% occurring in developing countries. Risk factors at birth, such as too short and long birth intervals and too low and high maternal ages, are found to be correlated with adverse birth outcomes--low birth weight, IUGR, and perinatal mortality.

This study aims to investigate the relationship between the risk factors at birth and subsequent reproductive outcomes using a pseudo-panel approach, applied to data from Demographic and Health Surveys (DHS) of 47 developing countries, 8 of which are in South and Southeast Asia. We test the hypothesis that risk factors at birth carry lifetime impact on females into their childbearing years, reflected in their experience of an increased risk for adverse birth outcomes and assess regional associations in the overall findings. We construct single-year birth cohorts within each survey round and link them together within country to form pseudo-cohorts. The risk factors at a daughter's birth of analytic interest include being born to a young mother (age <18), within a close interval to the previous birth (< 18 months), and at high parity (parity 4 or higher). These factors are obtained from the birth history reported by the female respondent in each survey round, along with other covariates such as the mother's education and place of residence at the time of birth and birth cohort year.

The analysis of data from 123 DHS surveys conducted in 47 countries between 1986 and 2007 supports our hypothesis that the proportion of risk factors at a daughter's birth for a given birth cohort increases the cohort proportion of adverse birth outcomes when daughters reach reproductive age. The coefficients of our model are sizeable, positive and frequently statistically different from 0. For example, for each percentage point of a female cohort born to mothers under 18 years old, 0.6% point is added to those females' subsequent probability as adults of delivering low birth weight infants. Similarly cohorts with high proportions bearing children at short intervals result in higher proportions experiencing child loss and small infants.

This study contributes to our knowledge of life course impacts of risk factors at daughters' birth on their adult reproductive outcomes. Interventions that target eliminating risk factors at birth, such as promotion of adequate birth spacing, can prevent adverse birth outcomes in the long run. The knowledge of covariates' influence mediating the relationship between risk factors at birth and adult birth outcomes can inform the design of interventions to alleviate the short-term adverse impact of risk factors at birth. Methodologically, this study expands the statistical tools available to assess longitudinal trends using DHS data and similar large-scale repeated cross-sectional data.

49-2

Negotiating Career and Family in India: Is Single Child a Compromise Option for Urban Women?

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In many developing countries, women struggle to balance between their career and family responsibilities. According to nationwide surveys, about ten percent of women in India deliberately opt for single child. We examine the levels, trends and determinants of single child families, using data from three rounds of National Family Health Surveys (NFHS), Indian equivalent of DHS, conducted in 1992-93, 1998-99 and 2005-06.The analysis focus on ever married women with single child who were either sterilized or over 45 years of age. Further the study explores the prevalence of single child families among different occupational groups.

The proportion of single child families is more among urban, educated and professionally employed women. Place of residence, economic status, women's age at child birth, husband's education and women's occupation are the major determinants. The findings showed that the mean age at marriage and child birth is relatively higher among women who are employed in the professional jobs. Women who work outside their homes have been reported to have comparatively smaller families than other women. Among non-working women, around three-fifths are having more than two children, while it is more than two-thirds among women employed in agriculture. More than 70 percent of poor, uneducated, unemployed women are having more than two children. About seventy two percent of women from deprived communities (Scheduled Castes and Scheduled Tribes) who are employed in agriculture are having more than two children. Single child families are more prevalent among professionally employed women who had higher education (11 percent), delayed age at marriage (28 percent) and delayed child birth (24 percent). This could partly be attributed to their exposure to the outside world, which in turn, affects their lifestyle and decision-making capabilities. The possible conflict between the role of the mother and work status has also been found to have a negative influence on the number of children born to them.

Findings of this study revealed that many employed women deliberately choose to have only one child as a compromise between family responsibilities and career prospects. Since the participation of women in employment is increasing, the prevalence of single child families is likely to go up in urban India. At the same time, the attitudes of young educated women towards family and children are undergoing considerable changes, resulting in late marriage and low fertility, particularly among the urban middle class. Undoubtedly, these women will be the harbingers of social change towards low fertility in India.

49-3

Marital Processes, Arranged Marriage, and Contraceptive Use to Limit Fertility

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An international, revolutionary transition away from parentally arranged marriages toward couple's choice marriages has been ongoing for decades and is still spreading through rural Asia today. Though we know this revolution has important consequences for childbearing early in marriage, we know much less about longer term consequences of this marital revolution. This study draws upon theories of family and fertility change and a rural Asian panel study designed to investigate changes in both marital and childbearing behaviors to investigate these long term consequences. The study setting, rural Nepal, is in the midst of a transition from young age at marriage, arranged marriage, young age at childbearing, and low prevalence of contraceptive use to older age at marriage, more participation in spouse selection, older age at childbearing, and a high prevalence of contraceptive use and provide excellent opportunity to investigate the influence of the revolutionary changes in marital behavior on contraceptive use. The uniquely detailed measures of local social and economic changes, parental family background, and individual non-family experiences, multiple dimensions of the marital process and measures of contraceptive use from 2,023 ever-married women provide an unprecedented opportunity to document both the overall influence of marital processes on contraceptive use and the independent long-term consequences of arranged marriage versus spouse-choice marriage.

Controlling for social changes that shape both marital practices and childbearing behaviors, and explicitly considering multiple dimensions of marital process, we find evidence consistent with an independent, long-term association of choice marriage with higher contraceptive use to limit childbearing. The findings are simple to report: more participation in the selection of a spouse is associated with subsequent higher rates of contraceptive use to limit childbearing, often many years later. This strong, statistically significant association is independent of many other key associations. First, older ages at marriage and longer marital durations are associated with higher rates of contraceptive use, but these factors do not diminish the association with marital arrangement. Second, marital cohabitation and the bearing of sons both have exceptionally strong associations with use of contraception. These strong associations do not diminish the association between participation in spouse choice and subsequent contraception either. Third, other known sources of variation in subsequent marital and childbearing behaviors, including community context, parental characteristics, premarital non-family experiences, birth cohort, and ethnicity also all shape contraceptive use as expected.

The implications are wide ranging. Documentation of this important relationship between marital arrangement and contraceptive use means that other dimensions of the marital process may also be important both as predictors of fertility behavior and as mechanisms linking non-family changes to fertility behaviors. These results add a new dimension to the evidence linking revolutions in marital behavior to long-term declines in fertility.

49-4

Women's Fertility Behavior in West Bengal, India- Levels, Trends and Determinants

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The multiphasic inter linkage within the various socio-economic and cultural factors along with fertility situation is the prime focus in this paper.

Fertility behavior has a demographic significance and also is a very important developmental indicator in terms of health or women's status. Low TFR, high contraceptive usage and high women's involvement in decision making in West Bengal but the sex ratio (963 females / 1000 males) and literacy (57%) is low, marriage continues to be at an early age (37% females are already married in age group 15-19yrs) and thus it does not seem to improve much in its fertility behavior.

Objectives:
1. To know the fertility behavior of women in terms of children ever born and contraceptive usage in West Bengal.
2. To explore the effect of socio-economic and demographic determinants on the fertility behavior of women in West Bengal.

The children ever born and contraceptive usage have been considered as dependent variables for the study of fertility in West Bengal. The likelihood of women having more children as well as contraceptive usage depends on many background, social, economic and demographic characteristics like that of education, place of residence, standard of living, media exposure, decision making, occupational status, age, marital status, etc. which have been considered as the independent variables in the study.

The spatial variation in the country with the help of data from NFHS and maps drawn by ARC GIS show that it is mostly the north-eastern and the northern states of India whose TFR as well as contraceptive usage are throughout in a bad condition, whereas, West Bengal shows a better fertility behavior among the women with a lower TFR and high contraceptive usage and seems it will soon reach the Replacement Level Fertility in few years time.

The Cross Tabulation and Binary Logistic Regression analysis has shown that the mass media and standard of living seems to have a strong positive effect among women's fertility behavior in West Bengal. Education as an important indicator seems to affect the number of children more than the contraceptive usage. The study also shows that it is mostly the less privileged group in the rural areas who are the ones showing adverse fertility behavior as these are the areas that lack the demand as well as the supply side issues.

The study shows that Media Exposure has a strong impact on the fertility behavior of women and so more effort should be put by the government to enhance the connectivity in rural areas so that even the less educated women can have the minimum basic knowledge on family planning and other aspects of fertility situation along with the a good and healthy life.

50-1

Fertility Intentions, Modern Contraception and Sexual Intercourse among Young Filipino Couples

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Researches on fertility in developing countries have focused mainly on women, rather than on both husbands and wives, with respect to their fertility intentions and sexual behavior. In this paper we examined the association of fertility intentions on two intermediate variables namely, the frequency of using modern contraception and coital frequency using information from a sample of 90 couples aged 21-35 years old. These couples came from a sample where one partner was a participant in the Cebu Longitudinal Health and Nutrition Survey in MetroCebu, Philippines. Each partnet was interviewed and provided a mobile phone to separately respond to programmed questions regarding his/her sexual activity and reproductive behavior within the next 24 hours over a period of four weeks. For our analysis we focused on data collected from the face-to-face baseline interview and the daily responses for the first seven days collected through experience sampling method (ESM), a daily diary method to determine the sexual and contraceptive behavior of the young couples. Baseline information showed that fertility intentions of partners differed. While more of the men no longer wanted children (43%) compared to their partners (38%), more women preferred to have children soon (11%) or later (51%) compared to their partners (9% and 48%, respectively). On average, husbands reported having more sex ranging from 0 to 14 times during the week (Mean=3.4,SD=2.7) compared to their wives ranging from 0-9 times during the week (Mean 2.8,SD= 2.2). Wives reported using modern contraception longer (Mean=3.4, SD=3.3) than the husbands (Mean=2.8, SD=3.1). Women who wanted no more children or wanted children later reported more days using modern contraception compared to those who wanted children soon. An increase in sexual activity during the seven days was associated with an increase in the use of modern contraception for men but not for their partners. Regression analysis controlling for confounders like age, sex, working status, marital status, education, number of children and household assets showed that fertility intentions were significantly associated only with the use of modern contraception for both partners, but not with sexual activity. Men and women who wanted to space children reported using modern contraception more often than the men and women who preferred to have children soon. The findings showed that that for men the frequent use of modern contraception is driven by their fertility intentions and their sexual activity, for the wives, fertility intentions mattered more than sexual activity in determining the frequent use of modern contraception. The findings showed that between these two intermediate variables, coital frequency, one of the most understudied intermediate variables explaining fertility, remains elusive and complex in its association with fertility intentions.

50-2

An Application of Supply- Demand Freamwork for Determinant of Fertility in selected countries of Asia

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The objective of family welfare programme in Asian Countries is to reduce the high birth rate in the population. Many evaluations should have done in the field of family planning. This effort has resulted from a sustained commitment on the part of governments, international donors and individual researchers over several decades to explain the contraceptive use and ultimately fertility reduction. Serious concerns have been expressed regarding population growth and its impact on human welfare. It is estimated that, unless there is reduction in fertility rate, the world population will cross the seven billion figure by the year 2012. This has worried policy makers regarding world resources and sustainable population.

Objective of the study is to understand the changes in unwanted fertility and cost of regulation and the strength of family planning programme and overall development in determining the wanted and natural fertility in some selected Asian Countries like Bangladesh (2004-2007), Indonesia (2002-2007), Nepal (2001-2006), Cambodia (2005-2010), Philippines (2003-2008) during different time period. For the present study, the data is obtained from Demographic and Health Survey. The Human Development Index for all the selected countries is taken from UNDP report. For analysis we use decomposition of fertility by using Bongaarts Methodology.

This study shows that wanted fertility is the main determinant of fertility behavior for the couples of Asian Countries. The status of family planning is slightly improved but there is need to go a long way as the unmet need is quite large. Above selected countries shows declining trend in the total fertility rate during specific period except Indonesia where total fertility rate is constant (2.6 per woman). It is to be noted that unwanted fertility is positively correlated with total unmet need. Nepal shows the highest unmet need of contraception. While Bangladesh, Indonesia and Philippines shows the increase in unmet need in specific period implying weakness of the programme, so there must be an immediate concern in programme implementation.

It also indicates that policy makers have to do some special efforts to motivate couples for regulate their fertility and must ensure the quality of care in reproductive and child health approach. In the last section of this paper the effects of development and family planning programme on the mediating variables are briefly examined which shows that declining demand for children motivated more couples to regulate their fertility by adopting contraception. This part of analysis indicates that socio-economic development has the expected negative effect on wanted fertility as well as a positive influence on implementation of preference in all the above countries except Indonesia. Family planning programme exert their strongest effect on fertility by increasing the level of implementation, but they also have some effect on wanted fertility.

50-3

An Insight Study on Causes of Unwanted Fertility of Six States in India

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One of the most important factors in reducing fertility level is to reduce unwanted fertility. Sometimes women are not ready for the pregnancies/births at the time it happened, the birth occurs without the willingness of mother, which can be further divided into mistimed births (wanted some time after) and unwanted births (not wanted any more) are conceptualized as unwanted fertility.

The objectives of this paper are (i) to observe the pattern of unwanted fertility through some socio-economic characteristics (ii) to find out the major decisive factors of unwanted fertility and (iii) to get the variation in the pattern of determinants among the six states and male/female. A recent study "Youth in India: Situation and need" 2006-07(as known youth study) is a first ever joint venture of International Institute of Population Science and Population council to identify the key transition experience of unmarried and married youths in India. It included a series of questions on education, work force participation, sexual activity, marriage and health etc. The study was conducted in a phased manner in six states of India: Andhra Pradesh, Bihar, Jharkhand, Maharashtra, Rajasthan and Tamil Nadu. Some variables for this study have been experimented in the present analysis. The present analysis based on both married women and men who were asked about their wantedness for the last child and current pregnancy which is used as a key variable to get unwanted fertility. This variable is categorized as wanted then, later or not at all. This analysis is focusing on the two later categories to get unwanted fertility of both married women and men aged 15-29. The contraception knowledge, couples' decision making attitude, some socio-economic and demographic variables are analysed to get the major determinants of the unwanted fertility. The crosstab and logistic regression have been used through Stata-8.0 for the analysis.

Among six states, Bihar and Jharkhand youth have mostly reported their last child or current pregnancy is unwanted. Around 25 percent youths in Bihar have unwanted last birth compared to 6 percent in Tamil Nadhu. The variation is more regarding the mistimed pregnancy rather than unwanted which indicates the need for family planning methods for spacing. The percentage of reporting unwanted fertility is almost doubled for female than male. The youth who have a vivid knowledge of contraception are less likely to have unwanted fertility. The youth who often discussed about contraception and having children have impressively less unwanted fertility. The knowledge of contraception, mixes with friends prior to marriage have positive impact of youths' wantedness of pregnancy. The patterns of determinants are almost same across the states. This study suggests vivid contraception knowledge and better communication between the couple, would definitely help to drop the unwanted fertility.

50-4

Value of Children and Fertility Preferences: Evidence from Odisha, India

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Odisha, one of the backward states of India, have attracted the attention of demographers mainly because of the falling fertility rates in spite of adverse circumstances, i.e., low state domestic product per-capita, high poverty, agrarian economy, abundant rural population. This paper based on the available secondary data sources and a filed investigation seeks to account for this anomaly and examines the value of children as perceived by poor and non-poor. This is a departure from previous studies that tend to relate children are considered as economic assets by poor households in rural areas. Findings indicate that preference for smaller families is spreading widely across socio-economic groups in Odisha. The rise in cost of bringing up children is the result of high aspirations for children's education. When value of children as employable economic assets has declined, a strong motivation for high fertility, as was argued in the past, no longer operates.

51-1

Tempo and Quantum of Fertility in Iran

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In 1980s, the cultural probes, early age at marriage, and socio-cultural expectation of first child soon after marriage led to high rates of fertility in Iran. However, since the mid-1980s, the fertility started to decline in a way that, the country has experienced an unpredictable fertility decline during the last thirty years. The Iranian Censuses indicated a decline in total fertility rate (TFR) of 6.3 in 1986, to a figure of 2.8 in 1996 and 1.8 in 2006.

Along with this tremendous decline, age at first marriage and mean age at childbearing goes up, making some debates on usual measures of fertility.

This study, applying Bongaarts and Feeney's 1998 method (BF) for adjusting TFR and using censuses data and 2000 IDHS made an attempt to remove positive and negative tempo effects from Iran's TFR and present adjusted measures for it.

Results indicate that in early years after revolution due to decrease of mean age at marriage, and low age at child bearing, the reported TFR was higher than adjusted one. While the usual calculated TFR in recent years is less than the real TFR of the country in absence of tempo effect.

51-2

Short Postponement of Entry to Motherhood in Iran

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Remarkable changes in life course of individuals have occurred in Iran during the past few decades. These changes mirrored in reducing fertility rates, increasing the average age at marriage and reduction of early childbearing. The present paper aims to study factors affecting of motherhood timing in Iran. Using the 2000 Iran Demographic and Health Survey (IDHS) and a qualitative survey the authors explore short postponement of entry to Motherhood in Iran. The result of survival analysis has shown that the median length of the first-birth interval is 2.7 years. Time trends indicate a delay of the first birth for the 1990 marriage cohorts onwards in Iran. A qualitative survey was also conducted and interviewed 30 women aged 20-49 who were married for more than one year. The findings of qualitative survey showed that although tendency for motherhood is common in Iran, most women do not plan to remain childless but do not tend to do so very soon. They can control fertility life, and they decide about whether and when they will have children. A short delay of entry into motherhood within the first three years of marriage has been increasingly common among women in their 20s who were born in the 1980s and thereafter and this postponement has strong associations with marriage age, being a student and tendencies of women for higher education. The postponement also results from the fewer financial resources of young couple and their more valuation to family and children quality. However some indirect social control such as infertility stigma, social disapproval along with reducing continued interaction with extended family, because they do not meet society expectations toward childbearing, restrict higher interval between marriage and first birth.

51-3

Birth Spacing and its Impact on Fertility of Bangladesh

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For the last few decades, demographers have directed considerable attention towards the study of human fertility through the analysis of birth spacing. Using the data of BDHS 2007, Cox Proportional Hazards Model is used to determine the covariates of birth intervals. For subsequent birth intervals, we found that mother's age at first birth, previous birth interval, mother's education and working status, mass media exposure are significant determinant of length of birth intervals. We applied Abridge Life Table (Rodriguez and Hobcraft, 1980) to analyze the pattern of parity progression of mother's up to fifth birth. The result indicates that, rural women tends to have shorter birth interval than that of their urban counterparts (in terms of probability) and higher educated mothers have higher birth interval than less educated or non educated mothers. And finally, using Bongaarts and Feeney method (1998), the tempo adjusted TFR was found to be 3.85, when the conventional TFR was 2.73 for the year 2005-06. These findings suggest that, an increased effort to widen the spacing of births will effectively reduce the level of fertility in the future.

51-4

Discontinuation of Contraceptive Use: A Study in a Rural Area of Bangladesh

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Bangladesh has experienced a substantial decline in fertility that has been achieved by means of a large increase in the use of contraceptives. Discontinuation of contraceptive use has been a major concern for the professionals involved to the field of population management. There are a lot of study on the prevalence rate of contraceptive among couples, but not sufficient research on the reasons why couples do not use contraceptives even if they are motivated to limit family size, why couple switches the method used, and why they give up the contraceptives after using some days or a period of time. This implies that the study of discontinuation of contraceptive use, along with the associated factors for such discontinuation, becomes important that would have further implications for continuing the success of family planning programs in Bangladesh.

The research was conducted in Sylhet Division a rural area of Bangladesh. Goayanghat upazilla was selected randomly from 13 upazillas of that district by simple random sampling. Alirgaon union was selected by the same process from 8 unions of the upazilla. Finally, 7 villages were selected randomly. In these seven villages, proportionate number of married women aged 15-49 was interviewed from each village. The sample frame was collected from the voter lists of the respective sampling area. Finally, a sample size of 385 has been determined to achieve the objectives of the study. Based on the objectives of the study and the variables and indicators used in the conceptual framework, a questionnaire had been developed for the collection of data. Fieldwork for the study was carried out by a team of five interviewers. Then the data entry was started with the data analysis software SPSS.

This study investigates the reasons for contraceptive discontinuation among the married women in a Sylhet Division of Bangladesh. The findings suggest that discontinuation of contraceptive use is affected by some socio-economic, demographic, cultural and programmatic factors such as age, age at marriage, duration of marriage, parity, education, and so forth, with predominance of demographic factors. The other reasons for the discontinuation of contraceptives are method related problems, method failure, infrequent sex, discomfort and some perceived negativity of methods.

52-1

Targeted Subsidies to Improve Enrolment to Community-Based Health Insurance among Poorest Households: Why Do We Need to Consider Community Perceptions and Criteria of Poverty During The Identification Process?

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Most of Poverty analyses in Developing country are based on monetary poverty concept targeting the incomes and consumption of households. Thus a household is regarded as poor if its incomes or its consumption level is low compared to a poverty line predefined. This conception doesn't take into account the own perceptions and aspirations of people; hence the development of community methods and criteria to define poverty in a given area, settlement.

To identify the community's perceptions and criteria of poverty

The study was conducted in Nouna health District located in North -West of Burkina Faso. A sample of heads of households was selected in each village to take part to the focus-group discussions we organized in 41 villages and 7 sectors of Nouna town around the concepts and perceptions of poverty. The discussions have been recorded, transcribed and analyzed using the software Nvivo9. We used the community wealth ranking as method to rank the households.

We will keep from debates about poverty and subjective perceptions of communities that it is mainly deprivation of capacities; basis needs shortage, indecent conditions of life. Another important aspect is an absence of social capital ie a social relations network on which to refer to face the problems.

Poverty is better felt by the one who is concerned or lives in the context than anybody. Therefore the community perceptions about poverty/ wealth reflects a certain realism in the way to appreciate the topic. The community perceptions and criteria of poverty are therefore determining if we want to undertake community development actions.

Key-words: Self appraisal - Poverty - Wealth - Community - Rural - Burkina Faso

52-2

Pneumonia, Poverty and Immunization among Myanmar Children Under Five

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Despite concerted government attention and support from the international community (GAVI Alliance) for increasing the coverage of immunization programs against common childhood diseases, Myanmar children under five years old continue to be severely impacted by potentially fatal illnesses which can be readily prevented by modern public health interventions. Two of these, diarrhoea and pneumonia, account for around 40 per cent of annual fatalities (WHO 2009) in Myanmar children. Research has shown that pneumonia mortalities are tightly correlated with poverty, socio-economic vulnerability, and inequitable distribution of resources. In Myanmar, environmental factors also come into consideration. By examining key socio-economic indicators in three of the poorest areas, each of which has distinctly different climatic characteristics – Rakhine, Magwe, and Ayeyarwaddy - this paper investigates the conjunction between immunization programs, poverty, and the distribution of health resources in relation to reducing childhood mortalities arising from pneumonia amongst Myanmar children under five years old. Initial findings suggest that reducing mortalities from pneumonia in this population group will require not only addressing deficiencies in public health policy and extending immunization programs to all children in Myanmar, but also addressing key socio-economic factors including access to health resources and transportation infrastructure.

52-3

"Poverty, Health and Economic Development of Women and Children: A Study of Four Most Populous States of India"

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Poverty and Health are now listed higher on the international agenda than ever before in the era of Inclusive growth and has been included for the first time in the Eleventh Five Year Plan(2007-2012) so that economic development also means overall human development of the country. As a result, policies to improve the health status has always been an important criteria of human development, justified by the recognition that good health is the basic right as well as a critical determinant of economic productivity. Better health has a positive effect on the learning abilities of children which leads to better educational outcomes like higher enrollment, grade completion and higher mean years of schooling along with an improved Maternal Mortality Ratio (MMR) of women. Poverty alleviation helps in betterment of the weaker and deprived sections of the society like women and children in terms of gender disparity, Infant Mortality Rate (IMR) and MMR. Indeed, three of the Millennium Development Goals call for health improvements by 2015: reducing child deaths, maternal mortality, and the spread of HIV/AIDS, malaria and tuberculosis. India has nearly 16 percent of the world's population and is the second most populous country, next to China. As per a report published by the World Bank, despite experiencing unprecedented economic growth during the last decade, the prevalence of underweight children in India is among the highest in the world and that this prevalence varies across states, demographics and socio economic groups. The present study focuses on the four most populous states of India, viz. Uttar Pradesh, Maharashtra, Bihar and West Bengal in order to explore the link between poverty, health and economic development of women and children among the states. The paper tries to focus on the alarming decline in the child population within (0-6) yrs of age, increasing MMR and less than expected decline in IMR in the above mentioned states except Bihar and provides valuable information on these issues. Data has been taken mainly from secondary sources like Census 2011 (Provisional Report), Sample Registration System (SRS), National Sample Survey Organisation (NSSO) and the like. The report points out to the fact that low birth weight in children; poor household hygiene, undernourishment and anaemia in Indian women are some critical issues that need to be dealt with. The results of the study are expected to provide the policy makers with crucial evidences on the overall infrastructural facilities available in the respective states as far as healthcare is concerned. It would also highlight on the requirement of inclusive growth (or get rid-off poverty) which can be an effective policy for further development of the healthcare sector.
Keywords- health, mortality, inclusive growth, malnutrition, gender disparity.

52-4

Out-of-Pocket Expenditure on Non-Communicable Diseases in India: Implications for Healthcare Financing

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Rapid economic growth and demographic transition has altered the disease profile in India with Non-Communicable Diseases (NCDs) emerging as the major cause of mortality and morbidity. Increasing prevalence of NCDs has nontrivial implications on social welfare and challenges policymakers to devise appropriate institutional response to minimize its impact. NCDs and related healthcare expenditure, being unpredictable, can jeopardise the household living standards and intensify poverty and inequality. Since out-of-pocket expenditure is the prime mode of healthcare financing in India, it is imperative to document the implications of NCDs on levels, patterns and determinants of out-of-pocket healthcare expenditure.

With this motivation, the paper analyses the NCD and healthcare expenditure information available through the Morbidity and Healthcare Survey, (2004) of India. The analysis focuses on the impact of NCDs on OOP expenditure and highlights its composition in terms of fees, drug expenditure and other incidental expenses for both inpatient and outpatient care. The analysis considers key socioeconomic and demographic correlates while examining the determinants of OOP expenditure on NCDs. Out-of-pocket expenditure by choice of health care providers is used to comment on the patterns emerging across public and private sector care. Finally, the study discusses the implications of the results in the context of major healthcare financing initiatives in the country. At present, India with a reproductive health focus offers limited social and financial protection to households affected by NCDs. Hence, the paper argues that strengthening of public sector healthcare delivery is essential to curtail the impact of NCD epidemic on healthcare expenditure and household welfare.

52-5

Unmasking Urban Poverty and it's Linkages with Child Health

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This paper is an attempt to unmask urban poverty by using multidimensional indicators of assets, health, hygiene, crowding and questions existing single index used by Demographic Health Survey (DHS) for estimating urban-rural poverty. For the first time in India this study provides an alternative approach by constructing a Household Wealth Index namely Poverty Index for estimating urban poverty based upon environmental surroundings, health practices and assets. It also intends to improve our perceptive on urban poverty by considering socio-economic demographic factors. The analysis uses the unit level NFHS-3 data, for the eight metro cities of India. The study investigates the effect of poverty and environmental conditions on Child health i.e. anthropometric assessment of the nutritional status, ARI, Fever and diarrhoeal disease among children under five across various cities which are at different levels of social development. The result depicts a fair picture of urban poverty and makes the invisible visible and provides an alternative for reaching the unreached and more vulnerable clusters. Also it shows that how urban environmental conditions significantly affects the health of urban poor child. The study accentuate the essentiality of putting focus on existing data collection programs such as the DHS and other nationally representative surveys should be re-designed to capture the changing patterns of the spatial distribution of population. Also it talks about urgency for having a national level health programme/mission for urban India to achieve the goals of MDG vis-à-vis a better and healthy future for our young generations.

53-1

Poverty Measurement: Approaches, Issues and Challenges

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Poverty is described in the World Development Report (2000-2001) as pronounced deprivation in wellbeing. Objectives of this paper are :

a) to review the current poverty estimation procedures/approaches at various levels with specific focus on the district level
b) to review the dimensions of poverty measurement
c) to review the available and potential data sources on poverty
d) to review the monitoring mechanism in place for tracking the progress in poverty eradication

Proportion of population below $1 per day, poverty gap ratio and share of poorest quintile in national consumption are the global indicators in use for assessing target 1. In India, poverty assessment is currently made on the basis of head count estimates of population living below the official income poverty line that is estimated on the basis of a normative calorie consumption to which an estimated sum is added to take care of non-food expenditure. Human development indices are also being used for assessment of development status. More comprehensive estimation of district level deprivation made recently by Rajiv Gandhi Institute for Contemporary Studies, India is another interesting contribution.

Some of the efforts made towards estimating poverty at district level are worth studying. For instance, the poverty estimates for Madhya Pradesh, one of the Indian states, based on National Sample Survey Organisation (NSSO) data on consumption expenditure (central schedules) collected every 4-5 years. These surveys conducted by the Directorate of Economics and Statistics of the Planning department at the state level provide the data that can be used to derive district level poverty and human development ratios.

The poverty measures used commonly include Incidence of poverty, Intensity of poverty, and Inequality of poverty have the useful property of being additively decomposable (i.e. the national poverty headcount will be equal to the weighted average of headcounts in rural and urban areas or different regions).

The Multidimensional Poverty Index, MPI, measure of poverty released by the Oxford Poverty and Human Development Initiative (OPHI) and the United Nations Development Programme (UNDP) attempts to go beyond income poverty to give a broader understanding of the many types of deprivation the poor may face. It is composed of ten weighted indicators that measure education, health and standard of living.

The review highlights the absence of sound systems for monitoring of poverty status across regions, socio economic groups and also for analysing intra-district variations in achievement of human development outcomes. It is expected that the quality of decision making would improve if the policy makers were supported with good quality data on the multi-dimensional nature of poverty and analysis of likely poverty and social impacts of policies.

53-2

The Census Microdata Wealth Index: An Application to Predict Education Outcomes in Developing Countries

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This research aims to develop a valid and consistent measure for socioeconomic status at the household level using census microdata available from the Integrated Public Use Microdata Series-International (IPUMS-I), the world's largest census database. First, we use principal component analysis to compute a wealth index based on housing characteristics and asset ownership. The validation strategies include comparing our proposed index with the widely used Demographic and Health Survey (DHS) wealth indices and then verifying the predictive power of our index on education enrollment and primary school completion. Moreover, we attempt to identify general conditions necessary to produce an internally consistent asset index based on census microdata. Our results show a consistently positive effect of the wealth index on education outcomes across four census samples (Peru 1993, South Africa 1996, Brazil 2000, and Colombia 2005). Furthermore, graphical analysis of kernel distributions suggests our measure is comparable to that of the DHS. Finally, through a stepwise elimination procedure, we find evidence supporting the internal consistency of the census asset index. As an important practical implication of our results, we are able to propose a methodology to determine which assets are more important in determining household socioeconomic status.

53-3

Poverty Measurement in Indonesia: Time for Reform and Change?

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Poverty issues in many developing countries have been consistently at the forefront of the national agenda. Indonesia is one of those countries where poverty has become a hotly contested political issue, both national and local level, since the country embarked on open democracy and decentralization. Indonesia's Central Statistics Agency (BPS) has provided the government with poverty statistics since 1984. BPS uses the United Nation's concept of basic needs to measure poverty in Indonesia. The measurement calls for the construction of a food and non-food poverty line in which those with income or consumption below the line are considered poor. The Foster, Greer and Thorbecke method is used to calculate headcount, poverty gap and severity indices as the main poverty indicators in Indonesia.

Recently, however, the poverty measurement officially used in Indonesia is under intense fire from various circles outside the government. Critiques to the current poverty measurement pointed several perceived weaknesses associated with the measurement. Perhaps the most important is the fact that the number of commodities used in the measurement no longer reflects the conditions of the Indonesian poor. One reason being that the 52 food items which make up the commodity basket do not reflect the changes in consumption habit of today, which includes prepared foods. The other reason is that the commodity basket is not local specific, but only considers the types of food consumed by Indonesians in general. Other critiques include the use of per capita instead of adult equivalent, and the inclusion of cigarettes in the calculation of food poverty line.

There are still other issues, such as the population reference being used in the calculation and the choice of using the direct or indirect method to calculate the non-food poverty line. The bottom line is that the current method no longer reflects to conditions of the population and must be replaced or, at least, revised to include current consumption patter. A completely new method is not in the offing; however, BPS has proposed a revised methodology to suit the current conditions.

The study assesses the proposed revised methodology for poverty measurement. The measurement takes into account critiques and suggestions for the new revised method, including the use of more food items, adult equivalent, and different population reference. In addition, there is also comparison between the proposed new method and the current method. The revised method tends to produce higher estimates than the current method; which make difficult for the current administration to implement for fear of misconception from the public.

53-4

Assessing Vulnerability to Multiple Stressors in Thailand

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The purpose of this paper is to assess village-level vulnerability to poverty and other demographic and environmental stressors using data from the Phang Nga province, Thailand. The analyses are based on a mixture of primary and secondary data sources. A mail questionnaire survey of 352 communities/villages was conducted in Phang Nga (response rate=80%) in March-May 2012. The questions in the survey included economic activities, past experience of natural disasters, perceptions and awareness of potential climate-induced disasters, and measures taken to deal with such disasters. Information on age, sex, education and labour market status distribution was obtained for each community/village from local area census data in 2000 and 2010. The data was also matched with the Village Basic Information (Nrd 2C) data to obtain information on living condition of a village.
The paper first examines the livelihoods of these villages and their socio-economic characteristics. Using a framework developed by Siegel et al. (2001) in their paper "Vulnerability: a View from Different Disciplines", the paper presents a vulnerability profile that encompasses the different definitions that have been offered in the economics literature.

The paper concludes by identifying vulnerable villages from a multi-dimensional perspective and offers policy interventions that are particularly tailored to their socio-economic profile and therefore go beyond this heterogeneity.

54-1

Demographic Transition and Potential for Development: The Case of Iraqi Kurdistan

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The effect of population growth and demographic transition on economic development has been well-documented. The aim of this study is to analyse the demographic situation in Iraqi Kurdsitan and determine the effect of population growth and demographic transition on the economic development in this region.

This study has been conducted through reviewing literature on the issue of population growth and economic development from different contexts and analysis of the demographic data and indicators that were obtained from WHO and World Bank reports on Iraq.

According to latest population estimates, Iraq is at end of stage two and beginning of stage three of demographic transition. This is concluded from the high fertility rate of 4.07 and the current age structure that includes a very high percentage of people in the age group 0-14 years (39.7%), while the work force age group (15-64 years) is (57.3%). The population growth in Iraqi Kurdistan is passing through a critical stage of demographic transition. It is extremely likely that the region will fail to efficiently move through the demographic transition and will experience a long period in the demographic trap, i.e. the population will grow steadily and rapidly owing to the high fertility and low mortality rates.

Demographic transition is in a critical stage in Iraqi Kurdistan and there is a clear need for action in terms of adopting appropriate family planning policies in order to go through the transition smoothly. As the demographic window will appear shortly after this transition is passed through, the Kurdistan government needs to strengthen the policies it has already initiated for better and more effective education, on-the-job training and health services, as well as proper investment and exploitation of important resources like oil, agriculture and tourism. However, the current political and demographic contexts of Kurdistan and Iraq as a whole hinder the adoption of large-scale, strict family planning policies.

54-2

Handicap, Education, and International Development (with Special Reference to Iran)

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Education is the key to advancement of persons with handicaps as it provides access to information, enables them to communicate their needs, interest and experiences, brings them into contact with other student, increases their confidence and encourages them to assert their rights. One of the biggest challenges facing education systems throughout the world is that of inclusion in education. In general, inclusion is about a philosophy of acceptance where all people in society are valued and treated with respect (Carrington and Robinson, 2004) and in education there is specific emphasis on the development of inclusive learning communities in which diversity is acknowledged and welcomed. In wealthier countries inclusion in education efforts tend to focus on the merger between well-resourced segregated forms of special schooling for learners with disabilities with equally well resourced mainstream education facilities. In economically poorer countries, however, where a separate education system for people with handicaps has never been fully developed and where mainstream education lacks resources, efforts tend to focus on all learners who are unable to access education. Compounding the challenge to building inclusive education communities globally is the prevailing understanding of why some learners experience difficulties with learning. According to Howell (2006), this understanding is deeply rooted in a historical assumption that learners of all ages can be identified and classified through notions of what is normal and abnormal. The objectives of the study relationship between education, handicap and development. Also to study the socio-economic features of handicap. Documentary method and secondary data are used for the study. The data was drawn from 2006 National Population and Housing Census. Statistical and demographic techniques are utilized for the analysis.. The Iran government has laws and schemes to promote the education of handicap children at various levels. Free education is to be provided to all the handicap children under the age of 18. However, exclusionary policies and practices that deny admission to handicap children are widely prevent all over the country.

Key words: Education, Handicap and Development

54-3

Nutrition Transition and Prevalence of Major Diet-Related Chronic Diseases in Sri Lanka

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The nutrition transition involves shifts in dietary and physical activity patterns. During the nutrition transition societies are converging to a diet high in saturated fat, sugars, and refined foods with low in fiber. These changes are reflected in nutritional and health outcomes, including changes in average stature and body composition. Historic processes of change that link with the nutrition transition are the demographic transition (the shift from a pattern of high fertility and high mortality to one of low fertility and low mortality) and the epidemiologic transition (the shift from a pattern of diseases from infectious diseases to a pattern of chronic and degenerative diseases). These historical shifts are associated with increased prevalence of chronic and degenerative diseases and obesity. Overall, these may reduce the quality of life.

Sri Lanka's demographic transition occurred in the post World War II period with a rapid decline in mortality. Life expectancy at birth increased from 44 years in 1945 to 75 years in 2004-5. Fertility transition began since the mid-1960s following the sustained decline in mortality. The Total Fertility Rate declined from 3.7 children per woman in 1981 to around 2.3 in 2003-06-approaching near replacement level. These demographic trends over the past decades have profound impact on the age-composition and composition of families and households and living arrangements of persons within households. In recent decades GDP per capita has been increasing progressively. According to the IMF classification of countries, Sri Lanka has moved from a low income country to a middle income country. Globalization in trade, with the involvement of transnational companies have substantially altered the pattern of food production, distribution and promotion and the population living in urban areas has been grown. These changes in globalization, urbanization and demographics have resulted in substantial changes in the life-style and the diet among the population and consequent increase in the diet-related risk factors and diseases.

The objectives of this paper are to examine the levels and trends in diet and diet-related chronic diseases during the nutrition transition in Sri Lanka and assess how the nutrition transition is reflected on nutritional levels and body composition of young children and their mothers. The research will draw data from different sources and synthesise the various insights into a coherent picture using multidisciplinary methods.These include: causes of death, hospital morbidity, food availability, consumption and expenditure (obtained from the Household Income and Expenditure Survey (HEIS) series) and anthropometric data (collected through the DHS program of the Department of Census and statistics). Drawing from the research findings policy relevant recommendations on appropriate interventions will be made

54-4

Understanding the Pattern of Consumption Expenditure and Health Spending in India

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Poverty is a key determinant of health care utilization as poor generally tend to spend less keeping health on a lower priority. But the standard poverty measures do not adequately reflect the health needs of the individuals as it is seen that the per capita household expenditure sometimes falls below the extreme poverty threshold of $1 per day (Van Doorslaer 2006). So, it becomes imperative that out of pocket expenditure should be taken into account while measuring poverty. There have been many studies on the measurement of economic well-being but only a few undertook the study of consumption pattern and out of pocket expenditure on health in India. So, there is a need to understand the pattern of consumer spending on different essential items and see the differentials across various demographic characteristics.This research aims to address the relative distribution of health expenditure by socio-economic and demographic characteristics in India. Moreover, the paper measures the relative share of health expenditure by adjusting for state specific poverty line.We have used data from the 64th (“Schedule 1.0”) round of National Sample Survey Organization (NSSO) collected during July, 2007 to June, 2008. Descriptive statistics, bivariate analyses and multivariate analyses has been used for the analysis. The monthly per capita consumption expenditure (MPCE) and the mean expenditure on health were the dependent variable in the analysis. Then, the percentage of catastrophic health expenditure was computed as CHE= Health expenditure/CTP*100 Where CHE is catastrophic health expenditure and CTP is capacity to pay.The paper finds that 64 percent of the poorest faced catastrophic expenditure as computed in the paper compared to 8 percent people among the richest quintile. It is seen that 42 percent of the poorest fall below poverty line(BPL) every year due to catastrophic expenditure. The poorer, rural, female-headed household, larger households, Schedule tribe and Schedule caste, illiterates, casual labors, old age people are the vulnerable groups facing higher OOP leading to catastrophic health spending. The study also shows that the expenditure on medicines accounts for a substantial proportion compared to other medical cost overheads.It was seen that OOP payments, in addition to pushing people below poverty line, also severely affect the living status of many households already below the poverty line.There is a need for a rationalized drug policies; pro-poor health financing policy focusing on financial protection and innovative financing mechanisms on the collection, pooling and purchasing side to reduce the intensity of poverty to target specific areas and specific populations in certain states where the poverty impact of OOP payments is greatest.

54-5

Evaluation of Sustainable Human Development Employing Data Envelopment Analysis: An Empirical Evidence from High and Middle Income Asian Countries

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This study evaluates the sustainable human development of 29 high and middle income Asian countries during 2005 - 2008 (the most recent year for which data are available) by measuring the efficiency in utilizing their resources to promote human developments. Such efficiency is measured by the so called "Data Envelopment Analysis or DEA" which is the non-parametric technique for measuring the relative efficiency of decision making units (DMUs) with homogeneous inputs and outputs. The fundamental concept of DEA is to compare each DMU with the best DMU which will be the best practice, having the efficiency score of 1. Any DMU with the less than 1 efficiency score is considered inefficient. Hence, countries are DMUs in this study.

In this study, the resources (inputs) are measured by two indicators, including CO_2 emissions per capita and energy use per capita, while the human development (outputs) is measured by four indicators according to Human Development Index, including gross national income per capita, life expectancy at birth, mean years of schooling and expected years of schooling. Any country with the efficiency score of 1 is considered efficient in utilizing its resources to promote human development, implying the high opportunity to achieve the sustainable human development. In contrast, any country with the less than 1 efficiency score is unlikely to achieve the sustainable human development since it fails to efficiently utilize its resources to promote human development.

The findings reveal that high and middle income Asian countries, in average, are not efficient in utilizing their resources to promote human developments due to the low efficiency scores which are not higher than 0.5 during 2005 - 2008. Additionally, their average efficiency scores have been declining year over year from 0.5045 in 2005 to 0.4874 in 2008, implying that these countries are unlikely to achieve the sustainable human development. After considering individual country, we find that Hong Kong, Philippines, Sri Lanka and Yemen, are considered efficient in production and likely to achieve the sustainable human development thank to the efficiency scores equal to 1 in every year.
Bahrain, Kuwait, Oman, Qatar and Saudi Arabia are ranked at the bottom five countries with the average efficiency scores less than 0.25, implying the very low efficiency in production and opportunity to achieve the sustainable human development. Furthermore, 17 countries experience the constant decrease in efficiency in utilizing resources to promote human developments, implying the lower opportunity to achieve the sustainable human development. In terms of region, South Asian countries are most likely to achieve the sustainable human development, following by East Asian and Middle East counties. Additionally, lower middle income countries are most likely to achieve the sustainable human development, whereas upper middle income countries are least likely.

55-1

Understanding Demographic Dividend in India

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Demographic factors have reappeared in the economic development debate with the emergence of the concept of ‘demographic dividend'. With India experiencing fast decline in fertility, there has been an overwhelming optimism that the demographic bonus will take the country to greater economic heights. At the same time there are pessimists doubting the ability of India to take advantage of demographic dividend due to severe institutional constraints particularly in providing productive employment to the working age population. However, most of these arguments remain merely as rhetoric without any systematic analysis of empirical data and estimating the complex linkages between population change and economic growth. This paper critically reviews and analyses the empirical evidence of demographic dividend in India. It also empirically estimate the contribution of the age structure change to economic growth in the country.

The study uses several methods to estimate the demographic dividend. Firstly, the two-stage least square method to overcome the well-known reverse causality between population change and economic development is adopted. Secondly, it also uses the macro-economic simulation models and estimate the contribution of age structure on the economic growth in the country. Thirdly, it reviews the demographic dividend enabling factors like saving rate, female labour force participation etc on account of demographic changes. The empirical analysis clearly exhibits powerful positive impact of working age group population boom on economic growth in the country. This is despite the fact that the educational achievements and health conditions of the people are far from desirable and the employment creation is far below the required level. Thus the study questions the common rhetoric on India not able to take advantage of demographic bonus due to structural issues. On the other hand, the paper discusses further on the pathways of demographic dividend in India unlike the experience of other countries. Finally, the study brings out the positive economic impact of following a fertility reduction strategy in the country.

55-2

Socio-economic Inequality in Child Malnutrition in South Asia: Trends Analysis During 1990-2010

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Economic growth is considered an instrument to improving health and nutritional status in the developing countries. The convention is that economic growth will improve incomes, especially among the poor, and increase their access to and consumption of health-promoting goods and services, leading to improved nutritional status. This argument is well accepted in context of reduction of malnourishment. South Asia has experienced high economic growth during the last decade. South Asia, however, still has both the highest rates and the largest numbers of undernourished children in the world. While poverty is often the underlying cause of child undernutrition, the high economic growth experienced by South Asian countries has not made an impact on the nutritional status of South Asian children. In addition there is dearth of literature showing the trend in socio-economic inequality in child nutritional status in the region.

This study assesses the trends in socio-economic inequality in child nutritional status (underweight, stunting, and wasting) in selected south Asian countries - Bangladesh, India, and Nepal - using the multi-round country specific Demography Health Survey data conducted after 1990. For the trend analysis three recent round of the country specific DHS is used Nutritional status of children is defined by using WHO anthropometric measures.

At the outset a wealth country specific wealth index is computed for each wave of the survey using Principle component analysis based on household economic proxies. The main socio-economic variables are: household economic status, mother education, place of residence, and sex of the child. Descriptive analysis is carried out to understand the differentials in child nutritional status across the socio-economic groups. Rich/poor ratio, concentration index, and concentration curve is employed to understand the socio-economic inequality in child nutritional status. Finally, multivariate analysis is used to understand the determinants of nutritional status in the selected countries.

In general, nutritional status of children remained high and declined sluggishly in all the countries. Nutritional status of children largely differs across economic groups and mother educational attainment in the countries while it is minimal across gender and place of residence. The pattern remained similar over the period. Moreover, disparities in underweight are increased within economic groups and mother educational attainment in all the countries. Findings masks that in the ear of rapid economic growth social disparities in childhood nutrition remained stagnate of increased in all the country. Moreover, children from rich households and educated mother are benefitted largely with the economic growth than children of other social groups. Thus the persistent social disparities call an urgent need to address the child health of socially disadvantages groups of the region.

55-3

Economic Status, Birth Spacing and Family Planning Among Couples in India

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Indian Family Planning programme has bestowed great deal of responsibility on women over the past five decades. However, it is well known that fertility decision making in traditional rural and patriarchal societies to a great deal be influenced by husbands and other family members.

We attempt to examine the determinants or factors related to the use of contraception and preferred duration of child spacing or birth interval among economically poor and nonpoor couples in India.

We use the couple data (N=39257) from the third round of National Family Health Survey (Indian version of DHS) conducted in 2005-06. We use wealth index and clubbed the lowest two categories of wealth index (poorest & poorest) to define poor and highest three categories (middle, richer & richest) to define nonpoor couples. We used logistic regression models to predict the likelihood of contraceptive use among couples. We also used ordered logistic regression models to examine the effect of socioeconomic and demographic factors on the length of child spacing.

We found significant differences in the use of contraceptive methods and preferred duration of birth interval among poor and non-poor couples in India. On average, poor couples are more likely to have sorter birth interval and opted for sterilization to restrict child bearing. On the Contrary, couples from nonpoor households were more likely to lengthy birth intervals and more likely to use spacing methods. We found significant discordance between Indian couples in preferred duration of birth spacing. This imply that there is an urgent need for involvement of men in Indian family planning programmes and specific focus on motivating couples toward the use of spacing methods for increasing the birth interval to help improve the health of lactating mothers and new born.

56-1

Male Singlehood, Poverty and Sexuality in Rural China: An Exploratory Survey in a Context of Female Shortage

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In China, marriage is still a highly valued social norm, and until the 1990s, practically everyone was able to marry. The situation has changed, however, and a rising proportion of men, in rural areas especially, is experiencing prolonged and even permanent singlehood due to the growing shortage of women on the marriage market. In the cultural context of China, singlehood is a state of frustration, and even of deprivation, for which it is difficult to find socially acceptable compensations. The lives of single men may thus be severely affected by this situation. How, and to what extent, does unwanted singlehood shape their existence? Do they find alternative means to access a satisfactory sexual life? Are their socioeconomic characteristics different from those of married men?

The data analysed in this presentation are drawn from a survey conducted in 2008 in a rural county of Anhui. Its dual objective was to achieve a better understanding of sexual behaviours in rural China in a context of strong social and political control. This study explores the link, well-documented elsewhere, between singlehood and poverty, and shows that poverty can be a dual factor of exclusion. Not only does it exclude men from marriage, it also excludes the poorest single men from all sexual activity.

56-2

Vulnerability to Poverty: Who are the Poor of the Future? A Multinomial Logit Analysis of Vulnerability and its Determinants

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Existing poverty reduction policies are criticized for targeting the poor of today, instead of those who might be poor tomorrow. Studies on vulnerability gained popularity as a result of the significant role of risk and its interplay with poverty. Emphasizing the dynamic nature of poverty, the paper provides a new index for vulnerability and discusses important determinants of this vulnerability. As the first Philippine research to discuss vulnerability and propose an original measure, the study also pioneers the use of a longitudinal data through the merged APIS of 2004, 2007 and 2008. While current measures of vulnerability exist in the literature, the researchers modified the methodology used for poverty status [Reyes 2002a] and applied it to their study of vulnerability. A multinomial logistic regression was employed to yield the determinants affecting household vulnerability. Echoing studies on poverty, variables such as household head characteristics, urbanity, housing quality, asset ownership and income from abroad were identified as the model's regressors. Furthermore, factors external to the household were regressed including macroeconomic indicators and weather variables. Results replicate those of existing studies – that vulnerability is greatest for households whose heads are uneducated, those located in rural settings with poor housing quality. In addition, vulnerable households are characterized by low employment ratios, limited income sources (whether domestic or abroad) and inadequate asset ownership. Ultimately, macro- level variables play a significant role in our analysis, with inflation, rainfall and typhoons greatly influencing a household's vulnerability level.

56-3

Female Sex Workers: Vulnerability to Solidarity through Community Based Structural Intervention

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Female sex workers are one of the most vulnerable groups who face challenges in their day to day life with the clients, police, pimps and their counterparts. The nature of profession leaves them alone in this world to face the critical health, HIV/AIDS, Psychological & social discrimination at various stages of life. Andhra Pradesh is one of the leading states of HIV/AIDS cases and having highest violence against women in India.

The intervention methodology initiated in Andhra Pradesh with the identification of FSWs groups with their existing networks and strengthening the formation of a Community Based Organizations. To strengthen the strong networking of 22 FSW CBOs were made functional in different geographical areas by adopting democratic procedure and conducting elections at the various stages. The democratic election has been organized at almost 577 identified Hot Spots (where FSW and Clients meet). To strengthen the CBO 5 different types of community committees formed in each CBO and 5 to 8 Hot Spot Leaders are democratically selected as the members of community committees to deal with the issues of Crisis, advocacy, communication, networking and health. Almost 826 community committee members of different community committees ensure that the critically concerned issues are sorted out at their level. The Executive Committee members of CBO deals the challenging issues at the district level and state level forum to safeguard the interest of Female sex workers at the social, psychological and political level. Almost 22633 female sex workers are part of the CBOs and united to face the challenges.

Ultimately, it can be concluded that the structural community based intervention has not only changed the lives of Female Sex Workers from frequent vulnerability to unique solidarity. They are now living with "We feeling". Further, it has removed the fear of loneliness and provided them safety.

56-4

Economic Inequality in the Vulnerability of Double Burden of Malnutrition

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Level of poverty has been reduced substantially in past decades in India but the economic development has also raised the chance of women being overweight or obese. By using third National Family Health Survey (NFHS-3) data in this study, a leading effort has been made to examine evidence of economic inequality in the vulnerability of underweight vis-à-vis overweight/obese women in reproductive ages in the Indian states. Adjusted concentration indices, concentration curve and multivariate regression analysis has been used to examine the effect of economic status on the double burden of malnutrition. The macro evidences illustrate that the women from affluent families are associated with high prevalence of overweight/obesity and low economic status associated with escalating prevalence of underweight women. The micro evidences from multivariate analysis strengthens such causational patterns of greater prevalence of underweight among high parity women contrasted by significantly higher prevalence of overweight and obesity among low parity women. The results point out that under-nutrition is still a major problem; at the same time there is an emerging challenge of dealing with the problem of overweight and obesity. Declining fertility, rising income, changing occupational profile, reduced physical activity coupled with increased nutritional intake are possible contributors to such dramatic rise in double burden of malnutrition but these risk factors are disproportionately distributed, specially to the defenselessness of poor.

56-5

An Exploration of Causes of Poverty in Female Headed Households: Evidences from NFHS-3 Data

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The persisting gender discrimination in the society deprive female to good education and nutrition and at the same time female face discrimination in employment also, which make female headed household vulnerable to poverty. According to NFHS-3 data 14.4 percent of household is headed by female. In India, 42.3 per cent of female headed households are in low Standard of Living (SLI) stratum as compared to 27.5 per cent of male headed households (NFHS III). The differences of poverty between female and male headed household is not uniform across state. The reasons for this difference are associated with the lower positioning and persisting discrimination in the lives of women which vary by the cultural settings of the states. The gender discrimination in different states can be understood by the differences in level of education and their involvement decision making in household affairs. The correlation matrix of poverty differential between male and female headed household and differential in education and empowerment variables are revealing the reason of higher level of poverty in female headed households. The correlation between the poverty differentials and literacy differentials among male and female headed household is + 0.67 (strong positive). The indicators related to their involvement in household affairs is also show a moderate relationship to poverty differential such as, such as making large household purchases (+ 0.53), making purchases for daily needs (+ 0.48) and final say on visits to family or relatives (+ 0.52) etc. The binary logistic regression has been used to explore the responsible factors to poverty in female headed household, in which marital status is used as dummy variable to explore that whether the household headed by single woman (widowed, divorced or separated) is more vulnerable to poverty or not. The regression result show that religion, caste, size of household, land holding, education and marital status is significantly affecting poverty in female headed household, while in urban area, marital status is not a good predictor of poverty among female headed households.

57-1

Sex Ratio at Birth and its Association with Women's Education in Six South Asian Countries: A Comparative Analysis Using DHS Data Sets

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In South Asia, large number of missing girls, due to sex-selective abortion and female infanticides, has led to an alarming population dynamics. Inspite of huge improvement in women's education, the puzzle of relationship between sex ratio at birth(SRB) and women's education needs further understanding. For this, demographic and health surveys(DHS) data collected around 2005-2008 for Bangladesh, India, Indonesia, Nepal, Pakistan and Philippines, have been analysed. Women's education has been categorised into three categories: non-educated, less educated(schooling <=9 years) and highly educated (schooling>= 10 years). Economic status of women is devised from household wealth index.

Women's education has consistently shown positive influences on almost all demographic and health indicators. Though SRB increases with level of women's education in Bangladesh, India, Indonesia and Pakistan while level of SRB was quite high among non- and less literate women in Philippines. Nepal does not show any association between the two. Place of residence is an important confounder in this association as the availability of modern technology in urban areas facilitates women to go for sex-selective abortion. In Bangladesh, Indian and Pakistan, high SRB (=>110 males per 100 females) is estimated educated-urban women. However, normal level of SRB (105-107) is estimated for highly-educated women from Rural Indonesia and Urban Philippines. Women from Rural Philippines, irrespective of education, produces high values for SRB.

Economic status has direct implications on high preference for male children as well as to accessing medical technology required for sex-selective abortion. High SRB(=>110) is estimated for highly educated non-poor women in Bangladesh, India and Pakistan. Specially, for Indian non-poor women, irrespective of their education, high SRB is estimated. In Indonesia and Philippines, high SRB(>= 110) is estimated for even poor and less/non-educated.

For capturing religious influences on SRB, two groups-major religion of country and other are formed. In Bangladesh, highly educated-Muslim women reveals high SRB (>=110) while religion is immaterial for highly educated in India. High SRB is estimated Muslim women, irrespective of their education, and less educated women from other religion in Indonesia and educated-Catholic women in Philippines.

In this paper, we have also estimated mean ideal number of sons and daughters. Findings suggest that Indonesia and Philippines don't show any difference between the two. Contrarily, the difference stood around 0.3 excess of sons per woman in Bangladesh, India and Nepal and 0.7 in Pakistan. High level of son-preference was observed among non-educated in countries other than Indonesia and Philippines. This study reveals that women from low socioeconomic strata have high son-preference, however, high socioeconomic strata women are more efficient to convert preferred no. of sons into actual due to their affordability of technology. Finally, the study also discusses policy implications to forestall further deterioration in SRB in respective countries.

57-2

Quality of Education and Sexual and Reproductive Health Related Outcomes: A Case Study from Bihar, India

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In India, aside from economic factors, school-related factors, including poor quality education have been observed to deter parents from educating their adolescents. Evidence however remains limited regarding school quality and the extent to which schools neglect such aspects of education as raising awareness of sexual and reproductive matters, enabling egalitarian gender role attitudes and negotiation skills and enhancing future aspirations. This paper seeks to describe quality of schooling experiences among boys and girls in public schools and its associations with school continuation or attendance, awareness of sexual and reproductive matters, gender egalitarian norms, agency and future aspirations.

Data are drawn from a study conducted in 30 schools in Patna district, Bihar, and covered students in Classes 9 and 10 and their teachers, as well as school dropouts. A guided self-administered questionnaire was completed by a total of 2985 students, 108 teachers and 243 school drop outs.
School quality is measured by: (1) material inputs and resources; (2) opportunities to learn as measured by student-teacher ratio, teacher absenteeism, length of school day, regularity of classes; (3) classroom dynamics and pedagogical practices as defined by student participation, type and regularity of co-curricular activities, teacher classroom positive/negative feedback as measured by teacher attitudes about capabilities, favouritism, and corporal punishment.

Preliminary findings present a mixed picture of school quality. Large proportions of students are satisfied with the facilities in their classrooms. However, 25% reported that there was no toilet facility in their school, and just 5% reported that a nurse or doctor provided health services at their school. Two-fifths of students reported teacher absenteeism in the one week preceding the interview. Considerable proportions had conducted such tasks in school as fetching water (20%), cleaning the classroom (51%) and assisting teachers in their home (8%). Substantial proportions reported no opportunities for non-academic activities, vocational skills training, sports, extra-curricular activities, for example. Many students reported that teachers punished or beat them: 36% had been made to stand in class for a prolonged period of time, and 56% had been hit or beaten by a teacher.

Gender role disparities are evident. More boys than girls aspire to continue their education up to a graduate degree (68% versus 55%), would decide on their own education (77% versus 53%), and would decide on their own marriages (52% versus 35%).

Students' awareness of sexual and reproductive health matters was limited: just 19% of girls and 31% of boys were aware that a girl can become pregnant once she has reached menarche, 38% and 61% respectively, had heard about contraception, for example.

Further analysis is underway to assess links between school quality and gender role attitudes, agency and SRH awareness.

57-3

Population Growth, Primary Education and Nation Building: Challenges for Asia's Newest Nation- Timor-Leste

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The nation-building process of Timor-Leste- Asia's newest nation faces the significant demographic challenges due to the population growth which is the fastest in Asia and almost the fastest in the world. The major contributor for this unprecedented growth is the extremely high total fertility rate of Timor-Leste which is one amongst the highest in the world. Amidst the worrying signs of socio-economic condition in this new nation, it is of great concern with the prediction that if the current fertility rate and its implied population growth continue the population of Timor-Leste will double within next two decades with a very high young dependency ratio. At the same time Timor-Leste also stands out as the poorest nation in Southeast Asia and among the poorest in the world.

The rapid growth of population is already creating enormous challenges to education sector. As far as primary school education is concerned, despite some promising improvements, student enrolment in primary schools is still very low and far behind the Millennium Development gaol, targeting 100 percent completion rate by year 2015. Primary net enrolment ratio still remains far behind the net primary enrolment rates of other developing countries in the region. Based on primary and seconndary data (primary data collected between 2006 and 2008) this research provides the projection of the population and its sectoral impact (infrastructure and resources) on primary education sector in Timor-Leste for next ten years. It also provides a framework for policy makers to face these demographic challenges well-prepared in order to improve or at least keep the education standard at its current level. The analysis in this paper mainly makes use of a computer model called Spectrum System which is developed by U.S. Agency for International Development. Demographic calculations and projections in this paper have utilised existing data (e.g. census and other national surveys) and key contextual information collected during a fieldwork (e.g. government policies, family size preferences, etc) to make well-founded estimations of future continuity or change. The analysis in this paper clearly shows that the current extremely high dependency ratio will decline only marginally in next ten years and it will put tremendous pressure on the government to constantly keep up with the increasing number of children entering school every year. Based on the findings the authors of this paper suggest that the guiding image of policies should be decisive trust in the resourcefulness of Timorese people, and the human and collective necessity of human resource development. A precondition is that public investment in knowledge-producing services ensures accessibility for all persons at the earliest stages of life and throughout that life. It is crucial that this newest nation takes this precondition as imperative to its nation building process.

57-4

Gender Differences in College Eligibility in Hong Kong: The Effects of Structural and Social Psychological Factors

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Female schooling advantage has emerged in recent years in research on gender differences, a breakaway from the previous focus on gender discrimination against female students. In Hong Kong, according to the University Grants Committee (UGC), female students have an advantage over male students in attendance at most post-secondary programs during the past fifteen years. Because attaining college is essential for upward social mobility, it is important to investigate why males are less likely than females to enter college in Hong Kong. Using longitudinal data from the Medium of Instruction (MOI) Survey, this paper examines gender difference in college eligibility in Hong Kong, and the structural and social psychological factors that account for the difference. The MOI project collected longitudinal data from 1999 to 2004. Two cohorts of students from about 100 secondary schools were studied. Each of the cohorts consists of about 15,000 students. This study assessed, among other things, the academic and psychological developments of students throughout their junior-secondary years (i.e., from Form 1 to Form 3). Additionally, the study traced the sampled students to two exit points. One was the last year of secondary school (Form 5), and the other was the end of matriculation (Form 7) when students took the Advanced Level (A-Level) examination that determines their eligibility for entering the university. In this paper, we studied the longitudinal cohort of students who were in Form 1 when the survey began in 1999. Descriptive analysis showed that 16 percent of the 1999 cohort of students was eligible to enter college. Girls were 4.3 percent significantly more likely than boys to be eligible. This gender difference did not change after parental education and family income are considered. Because girls' prior achievement in primary school was lower than boys', controlling for prior achievement revealed a larger female advantage. We also analyzed several mediators, including parental expectation and involvement, and students' aspiration, learning motivation and strategy. They are significantly and positively associated with students' eligibility to enter college. Our final analysis will apply structural equation modeling to examine the direct and indirect influence of all of the above factors on student's eligibility to enter college.

Our results so far are consistent with the past literature which identified the structural factors of parental education and family income on the one hand, and the social psychological factors of parental expectations and involvement on the other. Further analysis will determine if girls were more likely than boys to exhibit learning motivation and strategy that have positive influence on their eligibility to enter college. These factors have not been explicitly investigated for any Asian society in previous research. Policies that target gender equality in college access are discussed in the paper.

58-1

Understanding the Linkages of Chronic poverty and Child schooling in Rural Orissa

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This proposed study will be firstly identified poorest of poor household in that particular in rural set up and to know the schooling pattern among chronic poor those who have no political voice, no all weather roads in that area, and more specifically the distance of school from villages are more also one of major constraint for high school enrollment. The misuse of all beneficiary programme meant for poor also is an important issue for that chronically poor household. This small piece of work will be first identify the poorest of poor household and help them to get the BPL (Below Poverty Line Card) which is main get way to benefit all aspect in rural areas.

On identifying the chronic poor, I intend to examine the schooling pattern among chronically poor, poor but not chronically poor and non-poor in India. This will be the application of the chronic poor component. Hence, my dependent variables will be

1. School continuation: Relative differences in school continuation among chronically poor, poor and non-poor
2. School dropout: Relative differences in school drop out among chronically poor, poor and non-poor
3. Overage schooling: Differentials in overage among chronically poor, poor and non-poor households
4. Quality of child schooling: Differentials in clothing patter, basic educational ssets and opted private school as school education

Objective:

1. To classify the chronic poor household based on subjective and objective criterion.
2. To understand the schooling pattern (continuation, never enrolled, discontinuation, late schooling ,working with schooling and quality of schooling) among chronic poor, poor and non-poor household

The study will be used from primary data, collected from 600 households covering 597 currently married women in Balasore district of Orissa. The infant mortality and total fertility rate in the district is marginally higher than the state average. The other data sources (NFHS-3, Census-2011 if available that time) may be used for supporting the findings and policy information. The principal component analyses will be used to understand the objective poverty among household. Subjective measures will be integrated with objective measures to derive the chronic poverty. Descriptive statistics and the multivariate analyses will be used in the analyses

58-2

Exploring Gender Differences in Student Performance: A Multilevel Analysis Using Combined Individual, School, and District Level Data from Indonesia

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Previous research on gender differences in student performances has highlighted the importance of student's performance on the success of their future life. Data from the Ministry of Education and Culture in Indonesia suggested that there are gender differences in national exam scores. On average, boys had better mathematics performance than girls prior to 2006, but after this point, girls have outperformed boys with a continuous increase in scores. The performance in Indonesian language, on the other hand, is always better among girls than among boys. Moving beyond a descriptive analysis on the gendered patterns of test performances, this paper examines how family characteristics, school inputs, and district characteristics influence student performance, and further probes into the question of how much each of these factors affect the gender gaps.

Using combined individual data from the Junior Secondary School National Exam 2010, school statistics, and district level factors drawn from various data sources this study finds that students, schools, and districts have unquestionably significant effects on student performance. Results from a multilevel analysis indicate that gender does have effects on student performance but the effects are different among subject areas. Ceteris paribus, girls do significantly better on Indonesian and English languages but worse in math and perform equally in science. In addition, the effects of gender on all subjects vary across schools.

It is found that parental education and occupation are significant predictors of student performance, and mother's education has stronger effects on student performance than father's education. Interestingly, parents with tertiary education have different strength of association between boys and girls. Father's education has a stronger impact on boys whilst mother's education has a stronger impact on girls. Employment status of parents is also significantly associated with student performance.

This study reveals that there is no guarantee that schools with better resources lead to better student performance. With the fact that Indonesia has some of the lowest student-teacher ratios in the world, lower student teacher ratio is not significantly associated with a higher student performance. This study also discovers that the proportion of female teachers in each school affects student performance equally to boys and girls. Against expectations, the lengths of teachers' and principals' experience are found to have negative association with student performance.

Other main results from this study are that districts appear to be important in explaining variances in the student performance, and that districts affect boys more than girls. Unlike findings from previous studies, female role models at district level measured by percentage of females in District House of Representative, percentage females in managerial and professional jobs, and percentage females aged 25 or over holding senior secondary school or higher, have only trivial impact of girls' performance.

58-3

Gender, Generation and Development Gaps in Educational Attainment in Asian Countries

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The paper presents first findings from a new global educational dataset created at the Wittgenstein Centre for Demography and Global Human Capital. The dataset includes more than 130 countries (by December 2012 and will be further expanded in early 2012) is a unique source of detailed and comparable data on educational attainment in more than. Using this dataset we look at past and recent trends in educational attainment in Asian populations. We particularly focus on gender and generational gaps and inequalities. Level of educational attainment has been improving in nearly all countries over time and younger cohorts are much more educated than generations of their parents and grandparents, although some populations witnessed periods worsening educational characteristics as a result of development drawbacks like conflicts or other unfavourable socio-economic developments. However, improvements in education differ for men and women due to persisting unequal status of women in some societies. Employing gender perspective, we analyse developments in inclusion and exclusion of women from (higher) education across Asian countries. Progress in educational attainment will be examined under cohort perspectives. Furthermore, the dimension of educational entertainment by gender and cohort will be linked to the dimension of development. Along these three dimensions - gender, generation and development - we will discuss the implications of the observed structures and trends for more than 15 Asian countries.

58-4

Effect of Maternal Mortality on Children's Education: Evidence from Matlab, Bangladesh

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Background: Globally, about half a million women die each year due to causes related to pregnancy and childbirth ("maternal" causes). More than 99% of these deaths occur in less developed countries. Maternal death can affect the health and wellbeing of children, and they can suffer due to lack of day to day supervision and care as well as due to economic costs associated with maternal death. All these factors can directly or indirectly affect children's health and wellbeing. The objective of the study is to assess the effect of maternal deaths on child's completed years of schooling (6-19 years) by comparing children of dead and surviving mother.

The study uses data from Matlab Health and Demographic Surveillance System (HDSS) of the icddr,b. Using the HDSS database, the study initially identified mothers those died due to maternal or other causes during the 1982-2005 period. The study examines the completed years of schooling of children aged 6-19 years who were present in the 2005 socioeconomic census of Matlab (those mother died or survived). Other control variables include household assets and religion, mother's age at death and education and child's age and sex. Interactions are used to assess whether the effects of mothers' death differ by the sex of the child or household socioeconomic status.

After controlling for selected socio-demographic variables, the study found that completed years of schooling is significantly higher for children of surviving mother compared to children those mother died either due maternal or non-maternal cause. For children of mother died due to maternal cause, years of schooling is significantly higher if children are form wealthier household than the poor household. Children's of elderly mother and those who are Muslim had significantly higher schooling than young mother and those non-Muslim. Girl's years of schooling is significantly higher than boys, however, interaction with mother's survival status is not significant. Almost a similar pattern is found while children of mother those died due to non-maternal cause is compared with children of mother those surviving.

After mother's death, not only health of the child suffers but also the wellbeing (like years of schooling). This will have long term effect on the child's wellbeing and have implication for designing intervention.

59-1

Human Capital Trends in the Pacific Rim from 1970 to 2050

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The paper looks at progress achieved in terms of human capital from 1970 to 2010 in all Pacific Rim countries where data is available on levels of educational attainment. Progress has been especially impressive among younger women who are likely to become more educated than men in a majority of countries in the Pacific Rim. However, convergence to the levels of education of high human capital countries (US, Singapore, Japan, Australia, Canada, South Korea) has not yet been achieved by all countries and some will require a few more decades of education growth to overcome their handicap due to the momentum of educational development e.g. Vietnam or El Salvador. A few decades ago, the Pacific Rim region used to be polarized in terms of population and background characteristics such as levels of educational attainment that one would have had difficulties calling it a region. Just considering the three most populous countries in 2010, China, the United States of America and Indonesia had little in common demographically 40 years ago beside their high density on the Pacific coast. In 1970, most countries along the Pacific Rim had the demographic and education characteristics of a developing country with high fertility and low levels of educational attainment. The level of fertility was very much correlated with the proportion of the population over 15 years of age with a high education and Pacific Rim countries were spread across all possible stages of fertility and educational attainment – from Honduras (TFR>7 children & 10 per cent of population with secondary education or more) to Japan (TFR<2.1 & 90% with high education). In 2010, the fertility in most Pacific Rim countries is very low – 2/3 of the countries have a TFR below 2.5 children, meaning that those countries are reaching the end of the demographic transition with a large spectrum of education outcomes e.g. Chile (TFR=1.8 & ¾ of population with high education) and Vietnam (TFR=1.8 % and 1/3 of the 15+ group being highly educated.) Based on the Becker theory, this would mean among other things that investments in education are likely to follow in the region. I will adopt a prospective point of view and see what the combination of demographic trends and increases of levels of educational attainment could mean for the Pacific Rim countries until the middle of the 21st century in terms of age structure e.g. working age population, dependency ratios. Most of the analysis developed in this article is based on an exercise of reconstruction and projection of levels of educational attainment by age and sex for 120 countries (Lutz *et al.* 2007, K.C. *et al.* 2010) conducted at the International Institute for Applied Systems Analysis.

59-2

New Set of Projections of Population by Age, Sex, and Educational Attainment - Demographic and Human Capital Implications in Asia

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In the United Nations population projections, it is assumed that past levels of demographic development, mainly on fertility, mortality, and migration will continue for a long time and therefore do not consider much of the casual factors, proximate and distal, that might have had different pace of change in the past or will change differently in the future. As an alternative, we are currently working on producing a set of assumptions about the future of fertility, mortality, migration, and (in addition) education in all countries of the world. The findings are reliant on an argument-based expert's opinion. These assumptions will then be used to produce country-specific population projections by age, sex, and level of educational attainment. The methodology along with the results of the projection for different demographic indicators will be presented for the Asian countries and sub-regions. Our projection results will be compared with the ones of the United Nations. We expect that our methodology, of argument-based expert's opinion, together with scenarios of educational attainment by age and sex, will yield a different picture of the future evolution of the Asian population (including India and China) as well as that of the World.

59-3

Factors Affecting Child Education in Andhra Pradesh, India and Vietnam: A Longitudinal Study

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Children constitute principal asset of a country and their development determines country's future well-being. So, formal education of children is important for both, the children themselves and the country. In this respect, cross-country analysis helps in understanding same phenomenon in two distinct countries which are socio-culturally and demographically different.

The study aims to examine the level of schooling among young children and its determinants in India and Vietnam. At the same time, it also endevours to look into causes of school-droop out among young children in India and Vietnam.

The study uses the longitudinal data from the Young Lives, a study being conducted in India and Vietnam. The Young Lives has been following in each country a cohort of 1000 children at on interval of 3 to 4 years since 2001, when children were 7.5 to 8.5 years old. Now, two rounds of data collection has been completed, i.e, in 2001-02 and in 2005-06. So, the present study has used the two consecutive rounds of the data. In India and Vietnam, the study is bases on 1008 and 1000 children respectively.

Bivariate analysis has been used to see the level of schooling in each country and logistic regression analysis has been used to determine the factors for schooling and school-drop-out. The study has also used the Principal Component Analysis (PCA) to identify poor and non-poor household.

In India, almost 99% of the children report having ever been enrolled in school, but only 88.83% are still in school by 2005-06, with about 10% of the children having dropped out of school between the two rounds. Drop-out rates are higher in rural areas (10%) than in urban areas (3%), among the poorest quartile (16%), among scheduled tribes children, and among girls (11%). The results suggest that richer households, and households with more educated fathers, were more likely to send their children to school. Whereas children from backward classes were more likely to enrol in pre-school than the reference group (other castes), scheduled tribes were less likely. Further, children from Rayalaseema, and children from households belonging to the base category of primary occupation (mostly industry, informal manufacturing etc.), were less likely to be enrolled in pre-school.

In Vietnam, enrolment is high, in school in 2005-0. Disparities between rural and urban areas and minorities and the majority group are relatively small. However, regression analysis indicates that minority children are significantly less likely to go to school even controlling for household resources. In addition to that education of father and mothers belonging to minority groups are statistically significant predictor of child schooling. Furthermore, results on literacy tests indicate that disparities in school quality or parental involvement between groups also affect child achievement.

59-4

Can Demograpically Caused Human Capital Decline Be Offset by Human Capital Investments? Examples of China and India

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China and India are key countries among the “BRICs” - large economies experiencing fast economic growth towards leading positions in the World Economy. They also constitute the world’s two largest populations, constituting more than a third of the world’s 7 billion in 2010 (1.359 billion in China and 1.232 billion in India). Their future productivity is uncertain but the question arises what implications of demographic and human capital changes will be on productivity futures for these countries.

A country’s productivity potential is a key determinant of economic growth in modern knowledge-based economies. A country’s productivity potential could be influenced by its’ age composition – and display a hump-shaped profile, where experience and learning in youth tends to raise ones potential, while cognitive and physical changes in seniority may lead to a decline.

The implication of this is that variation in productivity over time and across countries can vary by their stage in the demographic transition, where countries at mid-level stages – with a greater population share in prime-productivity ages – is associated with a greater productivity potential.

From a demographic point of view, China is in a more advanced position than India due to its lower mortality and fertility which has lead to a rapid ageing of the population – which, ceteris paribus, could lower the country relative productivity potential. However, investments in education and health along cohort lines are also important and greater investments in this capital may potentially more than outweigh the adverse effects of population ageing and shrinking. Although a nations’ population may age and shrink, greater human capital investments can possibly offset these effects.

Our study focuses on the formation of human capital, including measures of comparable measures of cognitive abilities. Cognitive function (as observed in standardized tests such as TIMSS or PISA scores) has been shown to be an important determinant of national productivity. We also incorporate measures of formal education, work-experience, health and human capital depreciation following technological progress. Data include new demographic projections by age, sex and education (Wittgenstein Centre for Human Capital), cognitive and health measures using data from various representative surveys, like: SAGE, the “Building knowledge base on ageing in India”, CHARLS and CHNS. We analyze the relative effects different levels of human capital investments of successive cohorts, which can improve cognitive scores and health, but also lead to a delayed and lowered fertility. The net impact on productivity potential is modeled from different scenarios of cohort variation in productivity potential and demographic developments for the two countries. We identify the amount of educational improvement necessary to alleviate or even increase human capital levels in spite of the impact of a population with lower size and an older age distribution.

59-5

Education, Growth and Equity in Asian Countries

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This paper will examine some of the implications of educational development in Asian countries, focusing not on the implications of educational development for fertility or child survival (important as these are), but rather on labour market and equity considerations. Labour force growth is slowing in many Asian countries, and the educational attainment of those entering the working ages is considerably higher than those retiring from the labour force. This bodes well for economic growth, provided that the conditions are in place for the better educated cohorts to find productive employment. But the paths to better education also need to be examined. Who is getting the education, and are public investments in education making for greater equity or, instead, exacerbating the divisions between geographic regions, between rich and poor, and between urban and rural? What is happening to gender divisions? These questions will be examined in relation to a number of Asian countries, and some alternative approaches to more equitable educational progress considered.

60-1

Effects of Work to the Education, Health and Recreation of the Filipino Working Children, 1995 and 2001

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Children in the labor force are a social phenomenon that has become link with the third world countries. The Philippines is one country in the developing regions where there are many children who are productively earning. The study used the data that were collected in the 1995 and 2001 National Survey on Working Children (NSWC). The survey was conducted nationwide to collect data on the demographic and socio-economic characteristics of working children ages 5 to 17. The effects of working status and work-related factors to schooling, health and leisure status of working children in the Philippines was studied by fitting loglinear models to the variables of interest. In 2001, there are a total of 24.9 million Filipino children 5-17 years. Four response variables that characterized education status of working children were modeled. These are current attendance in school, dropping out from school, effect of work on schooling and reasons for dropping. Results show that in 1995 and in 2001, the nature of employment, working days per week, normal working hours per week and doing heavy physical work affect significantly school attendance.

Other factors found to significantly affect schooling for the 2001 child workers are activity during free time, and status of employment. Moreover, as the number of working days and hours per week, increases , the odds of dropping out from school also increases. Factors that help a child to stay in school are when he is engaged in less permanent job, when the “boss” is a relative, when his work is less exhausting , when work does not require heavy physical exertion, less activities that a child does during his free time as well as when he is unpaid worker. The health of working children is affected most when they work in the industrial sector where the child enjoys better pay but requires long hours, and heavy physical work. Factors that affect their recreation in 1995 are long working hours, absence of relative supervisor on the job. Similarly, child workers in 2001 with long hours of work affect their recreation as well as those types of work that provides little illumination. Children working in farming, fishing, and mining have less free time than those children working in other industries. However, regardless where the child works it reduces the playing time since in some cases sleeping is preferred than playing.The findings identify the factors that are positively and negatively affecting the child's education, health and recreational activities. Various persctives on child labor such as human capital, social responsibility, labor capital and child centered perspectives were used to explain the results.

60-2

Gender Difference and Employment of the Thai Elderly

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The labor force participation rate is an important indicator of labor market of the country and a major input into the economy's potential for creating goods and services. In Thailand, nearly three-fourths (72%) of the working-age population (persons aged15 years and older) was in the labor force in 2007. The proportion of older persons (aged 60 or above) participating in the labor force increased from 34 percent in 2003 to 35 percent in 2007. In terms of gender, labor force participation of women was less than men by about 10 to 15 percent for the total working-age population and gender different among the elderly were higher than that. The objectives of this paper are to examine the prevalence of labor force participation among older people in Thailand and to investigate the factors affecting this participation in terms of gender different.

The data for this study were drawn from the '2007 Survey of Older Persons in Thailand'. Multivariate analysis was used to identify the significant predictors of the likelihood of older people participating in the labor force of both genders, after controlling for other variables.

Overall, 30,381 older people aged 60 or above were interviewed. More than one- third (35%) of the elderly had participated in the labor force during the seven days preceding the survey. Stratifying the respondents by age and sex shows that the percentage of respondents who had worked varied largely according to age and sex. Results from this study found that male elderly were working higher than female elderly and as age increased, labor force participation rate of both sex decreased. Factors which highly significant for both sexes were: socio-demography (age, education, and household head), economic (saving, debt, and income sources), and physical health. The results of this study also suggest that for policies encouraging employment among older persons need to focus especially on those age 60-79 years.

60-3

Youth and Development: Emplyment and Unemplyment Situation in India

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Under the presence of liberalization, privatization and globalization (LPG) the county of India has been evident for significant change in economy as well as the society. It could be seen in the growth of infrastructure development especially in manufacture, transport, trade and commerce. The globalization has a very strong economic component which is seen especially developing countries of the world. However this is also visible in the country of India. There was continues increase of GDP growth which has further witnessed for improving socio-economic profile of the country. As a result there has been a substantial improvement in education, health and infrastructure development. Unfortunately the country is unable to curb several problems like un-employment, food security, poverty and environmental degradation. Generally the employment growth rate is much lower that the growth rate of GDP in India. Employment levels expanded steadily during the seventies and eighties, the rate of growth of employment continued to log behind that of the labor force. Unemployment among the educated youth showed a rising trend in recent decades in the presence of globalization. At the same time urban poverty is growing faster than rural poverty and similarly un-employment rate in urban is higher than the rural. Further the situation of un-employment is worse among female in various dimensions. In view of this the present paper highlight some of the important issues like demographic dividend and the youth, globalization and the employment status and the employment and un-employment situation among rural and urban youth separately in India across the southern states. The gender perspective in unemployment situation has also been addressed for the study. The available data from census and National Sample Survey (NSS0) statistics have been used for the study.

60-4

Socio-demographic Factors Associated with the Employment of the Youth in Iran

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Due to the age structure transition, the youth (aged 20-35 years) population comprised about one third of the total population in 2006. About 52% of the youth were in the labor force and 79% of those in the labor force were employed at the time of 2006 census. Using 2% sample of individual records of Iran 2006 census, this paper aims to examine socio-demographic factors associated with the employment of the youth. Findings from bivariate analysis show that those who were male, ever-married, older, had a lower level (primary or lower secondary) of education, qualified in the fields of education, arts and humanities, and living in urban areas and more developed provinces, were more likely to be employed. Results from multivariate logistic regression confirmed the significant effects of age, sex, marital status, and place of residence on the probability of employment. The youth with secondary education were less likely to be employed than their low educated (primary) and high educated (tertiary) counterparts. Similarly, provinces with low to medium levels of development had lower chance of employment than the least and the more developed provinces. Only those who were educated in the fields of social sciences and related disciplines had significantly lower employment rates compared to the reference category (those educated in the field of education). It can be concluded that the middle-class youth were more disadvantaged in finding a job. Given the huge bulk of the young population of the country, such effects will have serious socio-economic consequences.

60-5

Does Increasing Life Expectancy Translate into Longer Work Participation in India?

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Comprehensive understandings of long term self reliance of senior citizen is important for strengthening social security policy for old aged. Using two rounds of National Sample Survey data and adopting cohort approach, work participation rates (WPR) are projected up to 2050. The projected WPR are integrated with projected life tables. Findings reveal that during 2010-2050, WPR among age 60 plus males is expected to decline from 56.2 to 54.3 and among females, expected to increase from 22.2 to 29.6%. Projected Working life expectancy shows significant gain for both male and female, however, remaining working life as percentage of remaining life is expected to decline for males and increase for females. Female old age dependency ratio (ODR) is significantly higher than that of males. Potential ODR is expected to increase from 11.4 to 26.3. However, 10% shift from female to male contribution in ODR is expected by 2030.

61-1

Labor Force Participation and Demographic Window in Asian Countries with Emphasis on Female Labor Force Participation

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Simultaneously with birth decline among many of Asian countries during the past decades, population size of these countries have transferred to middle-age stage at this time, and their population aged 15-64 has increased up to 70 percent.

Since, the huge percentage of economical active population belongs to this group, we should observe increase in active population of these countries. But estimations show that this trend is not similar among countries that are experiencing this stage, especially in the case of women labor force, economic, social and cultural factors affect on fluctuation of labor force population.

Results of this study show that women labor force participation is more related to cultural variables. For example, in contrast with minimum level of women labor force participation among Asian Muslim countries (14% to 32%), some of these Muslim countries have transferred to middle-age stage (e.g. Iran, Lebanon, Bahrain & Oman). Instead, women labor force in China, Kazakhstan, Myanmar and Turkmenistan is at maximum level (67% to 62%) that some of them has not reached to middle- age stage yet.

In this study, we will use Method of Correlation for examine relationship between the rate of men and women labor force participation among Asian countries with their different economic, social and cultural characteristics.

The main source of the data in this study is demographic data produced by the United Nation's Population Program.

61-2

The Influence of Age-Period-Cohort Effect on Trends in Female Labour Force in India Evidence from National Sample Survey

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One of the striking feature of the Indian labour market is there is precedent decline in female labour force. The existing data from National Sample Survey shows except for the period 1999-04, the female labour supply show a declining trend. The recent data shows there is a further decline in female labour force from 2004/05-2009/10. The major question arises here why has female LFPR declined in spite of high GDP growth rate. Besides, India is going through a phase of demographic dividend where it is expected that there will be increase in female labour supply. At the same time the increasing education level of female over the time further added to this. But the recent decline in labour supply of female attracted the attention of researchers to explore the socio-economic and demographic factors that contributed to decline in labour force participation of women. Hence, the major question arises whether it is due to changing structure of the economy or a change in the size and composition of people that brings a permanent change in the behavior of women.

Given this context, the broad objective of the study is to investigate the changing pattern of female labour force thorough an application of age-period-cohort analysis. We use the panel of cross section surveys (NSS) from 2000 to 2010 and employs Age-Period-Cohort model to decompose the trends in labour force into age, period and cohort effects. We use these effects and observed determinants to understand the changing trends in female labour supply.

In this study we used the approach followed by Anderson and Silver (1989) to investigate the effect of age, period and cohort on mortality. In this case we applied it on female labour force. The state is taken as the unit of analysis. The depended variable includes age specific labour force participation rate. The ordinary least square regression analysis has been used to investigate the influence of age, period and cohort effects on female labour force participation. The preliminary findings of the study suggest that age and cohort effects can account for a substantial part of the variation in female labour force participation.

61-3

Overworked and Underpaid? Assessing the Conditions of Domestic Workers in the Philippines

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Domestic workers are one of disadvantaged sectors of the workforce because they receive the lowest wages, work the longest hours and are the least protected group of workers under national legislations. Recognizing these vulnerabilities the International Labour Conference of the International Labour Organization adopted the Domestic Workers Convention No. 189 on 16 June 2010. This convention "lays down the basic rights and principles, and requires States to take a series of measures with a view to making decent work a reality for domestic workers". In light of this convention this paper aims to assess the performance of the Philippines in realizing decent work for its domestic workers. Specifically, this paper aims to: a) present a brief profile of domestic workers; b) describe their wages and working hours over the years; and c) compare these with those employed in other industries. To achieve these objectives the series of Labor Force Surveys (LFS), conducted quarterly by the National Statistics Office (NSO) will be used in this study. Results reveal that in 2010 there were 1.9 million Filipino workers aged 15 years and over who were employed in private households. Of these number 30.4% or 585,000 were live-in domestic helpers. There were also around 15, 000 Filipino children aged 14 years and below who already work in private households, majority of whom are girls. Domestic workers in the Philippines are predominantly women, young and with secondary education. Moreover, they receive very low daily basic pay (P133.20 or $3) and work longer hours (52 hours per week) than other workers employed in other industries. Women work longer hours and earn less than their men counterparts.

62-1

Gender Based Within-Household Inequality in Immunization Status of Children in South Asian Countries

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There is compelling evidence of boys being preferred over girls in South Asia when it comes to providence for basic necessities like immunization, which results in gender based inequality among children in these necessities. The role of gender becomes even more important, because discrimination due to gender takes place within the household (in addition to outside of house) unlike other factors, which result in discrimination outside the house. Given the lack of evidence on gender based inequality in immunization status *within households*, we in this paper, estimate gender based within-household inequality in immunization status of children (1-5 years) belonging to four South Asian countries - Bangladesh, India, Nepal, and Pakistan.

The data for the present study is taken from Demographic and Health Surveys: Bangladesh - 2007; India - 2006; Nepal - 2006; and Pakistan - 2007. As, the interest of this study lies in gender based within-household inequalities, the eligible sample for every country comprises of those households which have at least one pair of male-female children under the age of 5 years. The outcome of interest in the present study is immunization status of children which is computed based on the count of immunizations received by a child and includes three dosages each of DPT and Polio and one dosage each of BCG and Measles. In the overall sample (for any country), the immunization status of children will range from 0 to 8.

First we check whether girls are discriminated against boys within households when it comes to providence for immunizations, using a multiple linear regression model of immunization status with household fixed effects. In this analysis all the household-level variables that are invariant across children drop out and the coefficient of gender informs us about the extent of gender based discrimination.

It may be noted that difference between the immunization status of male and female siblings (within a household) may be due to gender, birth order or age. This is so, because all the other factors like parental education are same for both the children within a household. Once the immunization status is corrected for birth order and age, then the sole difference in the corrected immunization status of the children within a household can be attributed to their gender. We therefore correct the immunization status of children for age and birth order using regressions and then decompose the overall inequality in the corrected immunization status into within household and between household components using mean log deviation. The within household component is nothing but the gender based within-household inequality in immunization status. A ratio of within household inequality to the overall inequality will give the contribution of gender based within-household inequality to the total inequality.

62-2

Anthropometric Evidence of Gender Inequality in India during the Nineteenth and Twentieth Centuries

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There is strong evidence of increasing gender inequality in India using sex-ratio indicator provided by the Census of India. Recent data on nutrition and mortality reiterate this finding. For the historical periods we do not have any available data except for the sex-ratio indicator from the Census that started in 1871. The data are aggregated by regions thus making it difficult to study gender inequality by religion and caste. Moreover, under enumeration of unmarried and young females was common in some regions. The other possibility is to use adult height data to understand gender inequality in welfare.

We investigated gender inequality by taking adult height data of indentured laborers that emigrated from the ports of Madras and Calcutta to Fiji, South Africa, Jamaica and Mauritius.

We used ship records of "coolie" (indentured) emigrants from India to Fiji, Natal, Jamaica and Mauritius from the 19-20c. Also, National Family Health Survey-3 was used to understand gender inequality from 1955 to 1982. We have individual information about age, sex, height, area of birth, and year of measurement from the emigrant pass. Using this information we converted heights of adults by their birth cohort and sex to understand gender inequality from 1820-1982.

Using the emigrant data, we can demonstrate that there is a 10 to12 cm difference between male and female height and it has not changed very much from 1820 to 1982. The average male and female heights seem to stagnate after 1950. Gender dimorphism was calculated as (Male-Female height)/ Male height*100. There is an increase in gender dimorphism from 1820-1830, 1855-1870 and 1955-1982. In the 19c, gender dimorphism increased when male height declined. However, in the 20c, we observe a slight increase in dimorphism though there was a slight increase in male height.

South Indian women were taller than North Indian women during the 19C. For the post 1950s we could divide regions into 6 categories; we can see that South Indians were doing better than central and east Indian women (Bihar, Orissa, Madhya Pradesh and Uttar Pradesh).

There was no strong improvement in the average stature of Indians from 1820 to 1982. Gender inequality increased slightly from 1950s though there was a slight improvement in the economy. Stature can be used as an indicator of gender inequality along with other traditional indicators like sex-ratio. Recent literature points that sex-ratio is decided by nutritional status and more females are born during nutritional crisis. Hence height data could complement sex-ratio data to understand inequality by taking into consideration the survivors instead of missing women.

62-3

Breastfeeding and Weaning Practices:Through Gender Lens

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The gender disparities in child health are a striking phenomenon in South Asia. The objective of the study is to understand the discriminatory behaviour in breastfeeding and weaning practises and the underlying causes which have long term impact on the health of the child. Here, we conceptualize that the male children will have better breastfeeding and weaning practises as compared to the female children, therefore this study tries to explore the actual behaviour as compared to the perceived and expected behaviours and the underlying causes for the behaviour. The present study uses primary data, information for 330 children of age 0-59 months were obtained from 12 villages in West Bengal. Bi-variate analysis, multivariate analysis has been done and qualitative data has been uses to support the findings. Findings show that the feeding of colostrum is higher for the female children than male children. The mothers perceive colostrum as 'dirty' and so it is not being fed to the male children. This misconception about colostrum has been advantageous for female children. The female children are also found to have longer durations of exclusive breastfeeding. It can be noted that, women are more concerned about their male children and they give them water so that their throat do not go dry. On one hand, this depicts the favourism for male children but on the other hand, it proves to be disadvantageous by reducing the duration of exclusive breastfeeding. Much difference in the frequency of breastfeeding, type of breastfeeding and food intake has not been found. However, the duration of breastfeeding is longer for the female children as compared to the male children. Further, it has been observed that male Muslim children have the shortest mean duration of breastfeeding because of certain prejudices prevalent in their society. The mean duration of breastfeeding also shows a decline with the increase in the birth order for both male and female children. The hazard of discontinuation of breastfeeding is also low for the female children. The result does not show very clear pattern of discrimination. The advantage received by the female children can be attributed to the lack of correct knowledge about breastfeeding among women.

63-1

High Sex Ratios in Rural China: Impact on the Psychological Wellbeing of Unmarried Men

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China has the highest male to female sex ratio at birth (SRB) in the world, at 118 in the 2010 census and with levels highest in poor rural areas. Rural-to-urban migration also occurs on a huge scale, driven by rural poverty and the need for cheap labour to fuel China's huge urban manufacturing sector. Household registration regulations *(hukou)* prevent rural-urban migrants from settling permanently in cities. However, urban registration can be acquired through marriage and many rural females now acquire urban residence through this route. This has led to a large excess of males in many rural areas. The purpose of this study was to explore the impacts of this combination of the high SRB and rural-urban migration on the sex ratio in the reproductive age groups, and to explore the effects of this on the psychosocial well-being men in rural Guizhou Province, south-west China.

The study drew on three sources of data: (1) routine demographic data from 36 Guizhou villages, (2) in-depth semi-structured qualitative interviews with 45 unmarried men aged over 30 and, (3) a questionnaire survey of 1000 unmarried men and 1000 married men over the age of 30.

Our results show high levels of rural-urban migration leaving inland villages depleted of young people, especially women. There is a strong gradient across the age range in the ratio of unmarried males to females in all the villages from 1.9 in the 20-24 age group, to 75 in the 35-39 age group. Interviews with the unmarried men showed that most blamed their failure to find a wife on their relative poverty and the ease with which women can marry-up and leave rural areas. Most of the men spoke of feelings of failure, describing themselves variously as: aimless, hopeless, miserable, sad, angry and lonely. The questionnaire survey showed that unmarried men had significantly lower education levels and income than men who were married. Unmarried men also scored significantly higher than married men for depression (using the Beck Depression Inventory) and aggression (Buss and Perry aggression scale). They also had significantly lower self-esteem (Rosenberg self-esteem scale).

While the SRB has recently fallen slightly in China, the problem of the sex imbalance is likely to continue for at least a generation, since the SRB has been very high in parts of rural China for 20 years, and women will continue to migrate away from rural areas in far larger numbers than men. The poor outcomes for unmarried men in this study strengthen the case for the need to address the very high sex ratio in parts of rural China.

63-2

Does Religion Affect Son Preference in India? An Examination of Hindu-Muslim Differences

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Despite the extensive literature on son preference in India, a key gap remains in our understanding of differences that may exist between Hindu and Muslim households, constituting about 80% and 13% of the Indian population respectively. Various studies indicate that greater economic and social value is attached to sons in a patrilineal kinship system. A groom's family receives dowry at the time of marriage, and married sons live with parents and continue the family's lineage, thereby making sons more likely than daughters to provide material help and greater social status to parents. There are also significant interactions between religious beliefs, gender relations, and social norms and customs, which this paper seeks to examine in the context of son preference.

Amongst Hindus, a soul is said to reach heaven only if a son, grandson or another male relative lights the funeral pyre. Traditional Hindu marriages involve dowry payment by the bride's family and her relocation to the groom's household; hence daughters are associated with higher economic costs for parents. Research suggests that since Muslim households have a higher prevalence of consanguineous marriages, involving bride price instead of dowry, they may not associate daughters with unduly high costs. However, to the extent that son preference relates to women's status, data suggests that Muslim women in general have lower education, economic achievements and household autonomy compared to Hindu women. Evidence for lower Muslim son preference is not found by studies of Hindu-Muslim child mortality differences. Recent research also indicates that while Muslims discriminate less against daughters, first-born or when the family already has sons, Muslim female child mortality is higher than Hindus when the family already has daughters.

Using the three rounds of the National Family and Health Survey, I will examine to what extent do differences in son preference exist between Hindu and Muslim households. In order to examine son preference in both its latent form as an ideal fertility preference and its manifestation in actual behavior – stopping and female-specific abortions – I propose to use three measures: ideal sex-composition of children, proportion of sons in actual family size, and sex ratios at birth. Since sample registration system data is not available by religion, I will construct birth histories from the data. The analysis will account for parity, existing Hindu-Muslim differences in education, women's empowerment, standard of living, and access to mass media, factors known to be negatively associated with son preference, as well as cluster- and state-level residential concentration.

The results have important implications for understanding whether son preference will affect Hindu and Muslim demographic trends differentially in the future – in particular, the effectiveness of family planning programs, further declines in desired fertility, and future trends in sex ratios.

63-3

The Influence of Family Sex Composition of Living Children on Fertility Desires and Contraceptive Use in Urban Uttar Pradesh, India

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The state of Uttar Pradesh (UP) has the second highest total fertility rate nationally, at 3.8 births per woman, as well as unequal child sex ratios (age 0-6) with 896 females per 1,000 males in urban UP (NFHS-3). Previous research from South Asia shows that family size and composition are associated with contraceptive use and fertility desires (Jayaraman et al, 2009). This study extends this work by examining the association of family sex composition on fertility desires and contraceptive use in urban Uttar Pradesh.

This study uses baseline data, collected in 2010, from the Measurement, Learning & Evaluation Project for the Urban Reproductive Health Initiative being implemented in six cities of UP. A representative sample of households and currently married women (ages 15-49) were selected from each city. The total sample size across the six cities is 17,843 women. The sample for this analysis is all non-pregnant women with 1 or more children (n = 15,303).

The independent variable of interest, family sex composition, is based on each individual's number of children and the sex of these children. Composition was categorized as: same number of sons and daughters, more sons than daughters or more daughters than sons. Two dependent variables related to fertility desires and contraceptive use were explored; desire for more children (want no more vs. want more/undecided) and contraceptive use (modern, traditional, and non-use). Multivariate models were used to explore the association between family sex composition and the two dependent variables controlling for age, education, religion, wealth, city, caste, slum residence, employment status in the past year, and parity.

Preliminary multivariate results show that women who have an equal number of sons and daughters and women that have more sons than daughters are both significantly more likely to want no more children compared to women that have more daughters than sons. Further analyses with interactions demonstrated that women with higher parity and equal number of sons to daughters were less likely to want no more children than women with lower parity and equal number of children; this may reflect high overall fertility desires among women with high parity. In multinomial logistic regression models, women with the same number of sons and daughters and women with more sons than daughters are significantly more likely to use modern contraceptives than to be a non-user, as compared to women with more daughters than sons. Similar patterns were tested and found significant in the relation between modern and traditional contraceptive use.

Efforts to change high fertility desires and increase contraceptive use should include counseling for women and men on the value of girls and link women to current government efforts that incentivize having girls through conditional cash transfer programs.

64-1

Association between Intimate Partner Violence and Unintended Pregnancy: Evidence from Thailand

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Previous studies suggest that intimate partner violence (IPV) is positively associated with a number of reproductive health problems. However there is a lack of knowledge about the association between IPV and control over fertility among Thai women. Also the prevalence of physical and sexual violence that leads women to experience an unintended pregnancy is high in Thailand. This study aims to examine the association between unintended pregnancy and the level of IPV, and to explore the factors affecting unintended pregnancy among Thai women aged 15-49 years. Study has used secondary data from the 2000 WHO Multi-country Study on Women's Health and Domestic Violence against Women, Thailand. A total of 531 women who had their last pregnancy within the last five years and had a single life partner preceding the survey were chosen for this study. One-third of the respondents reported that their last pregnancy was unintended. About 40.5 percent of the participants reported IPV in their life course, 13 percent reported only physical violence, 16.6 percent reported only sexual violence and another 10.9 percent reported both physical and sexual violence. Women who experienced unintended pregnancy were more likely to be younger, unmarried, have (more) several children, be not financially autonomous, and of lower socio-economic status. Also, women who engaged in risk behavior such as using alcohol, smoking, having a partner who had sexual relations with other women, and who had experienced any form of violence were more likely to report that their pregnancy was unintended. Finally, results of logistic regression showed the odds of unintended pregnancy for (1) women who experienced both sexual and non-sexual violence was 2.4 times higher, (2) only sexual violence was 2.7 times higher, and (3) only physical violence was 1.5 times higher, compared to non-abused women. These findings strongly indicate the need for the development of appropriate IPV prevention and intervention programs to improve health of Thai women through social and political response.

64-2

Implication of Violence on Health Status of Married Women: A Study of Mumbai Slum

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Women in India experience violence in various forms throughout their lives, and it cuts across boundaries of caste, class, religion, and region. Among the different types of gender-based violence, domestic violence is the most common type prevalent in India. According to the National Family and Health Survey-3 (NFHS-3) nearly two in five (37 percent) married women have experienced some form of physical or sexual violence by their husband. Violence against Women is a crucial cause of injury and risk factors that leads to many physical and psychological health problems contributing to a heavy burden of disease. So to address the serious and unavoidable consequences of gender-based violence against women, there was a need to have more information on the prevalence and correlates of gender-based violence. The study being described in this report is a small step in that direction.

To study Implication of violence on health status of married women: An urban slum study

The data for this study is derived from a multiyear study by ICRW in Shivaji Nagar (a low income community) of Mumbai. The study is being funded by National Institute of Health (USA) and popularly known as RISHTA (Research and Intervention on Sexual Health: Theory to Action).The data presented here describes the baseline information collected from 645 married women who consented to participate in the study. Bi-variate and Multivariate analyses were carried out to explore the predictors of violence.

Domestic violence against women is a difficult and intractable health and social problem in India. It was seen that Physical Violence (35 percent) was found to be the major type of violence faced by the women. Findings of this study indicate that risk of facing physical and sexual violence is more among women had never gone to school. Women whose husband consumed alcohol were around four times more likely to report physical violence (OR 3.79). Likewise, if the husband consumed tobacco, the likelihood of experiencing violence increased by 45% (OR 1.4).Controlling attitude of husband also has significant association with violence faced by the women.. An interesting finding was that women whose husbands had STI like symptoms or having extra marital sex were likely to have high self risk perception of STD.Our study finding also indicates that emotional status and self esteem of women was significantly associated with violence faced by the women The study has demonstrated that an exploration of the ways in which age, caste, education and duration of marriage, among other factors, are associated with different forms and reasons for abuse is important in informing context-specific efforts in prevention and intervention of domestic violence

Key Words: Violence against Women, gender based violence, extra marital sex, Sexual violence. Physical violence

64-3

Students' Perceptions of What Constitutes Domestic Violence: Evidence from a School Based Survey of Grade 6 and Grade 12 Students in Indonesia

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Recently the profile of domestic violence has been raised in Indonesia, with the national legislation on *The Eradication of Domestic Violence* (2004), and the 2005 *Zero Tolerance Policy* on domestic violence. Issues related to domestic violence have also been included in the school curriculum and textbooks starting from Grade 5. However the reporting and persecution of domestic violence crimes in Indonesia remains low. The public does not recognise domestic violence as a crime. This paper is based from a survey of students in different provinces of Indonesia (2010 Gender and Reproductive Health Survey, Grade 12 (6,555) and Grade 6 (1,837). The objectives of the survey are to examine students' views on physical and verbal abuse between family members. Understanding students' perception of domestic violence is important because their views may influence whether they report cases of violence, and also whether they themselves will engage in the behaviour as adults.

The survey is a multi-level study of students, teachers and school principals conducted in Jakarta, West Java, West Nusa Tenggara and South Sulawesi. The survey includes a mix of schools in urban and rural areas, religious and non-religious schools, and top rated and lower rated schools. Students were presented with a list of 10 behaviours. For each behaviour they were asked to indicate whether they believed the behaviour could be classified as ‘domestic violence'. The 10 behaviours were:

- Father hits mother
- Mother hits child
- Father hits child
- Mother verbally abuses father
- Father verbally abuses mother
- Mother verbally abuses child
- Father verbally abuses child
- Child hits mother or father
- Mother hits father
- Child verbally abuses mother or father

We use bivariate and multivariate analysis to investigate how students' views of what constitutes domestic violence are shaped by the behaviour itself, by the students' characteristics, as well as by the school characteristics. We find that physical violence was significantly more likely to be classified as violence compared to verbal abuse. The percentage of students who classified the different hitting examples as constituting domestic violence ranged from 61 to 89 per cent. In contrast the respective range for the verbal abuse statements was only 37 to 50 per cent. A behaviour was more likely to be identified as domestic violence if it involved the two parents (e.g. father hitting mother) compared to if it involved a parent hitting a child, and if the perpetrator was the father rather than the mother. Further investigation reveals that perceptions of domestic violence varied significantly by both the student's individual level characteristics (age, sex, religion) as well as by the type (religious vs. non religious) and quality of the school they attended and the province they lived in.

66-1

Infant Mortality in Iran, 2006: Regional Variations and Correlates

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The last two decades have witnessed considerable improvements in the living conditions and health status of Iranian population. On the one hand, access to such modern amenities as electricity, piped water, telephones, and mass media has become almost universally accessible in both urban and rural areas of the country. On the other hand, the community based primary health care system created in late 1980s has succeeded in extending basic public health and MCH services throughout the country. As a result, contraceptive prevalence rate has risen above 75% of the eligible couples, total fertility rate has dropped below replacement level across almost all regions of the country and such indices of public health as infant and child mortality have been reduced drastically.

Infant mortality rates derived from the 2006 census indicate an overall IMR of 36.69, the rate for the urban areas (36.01) being only slightly lower than those of rural (37.91) and unsettled (38.09) populations. There are however considerable differences among the 30 provinces covered by the census. IMR figure for the total population varies from 14.14 per 1000 births (in Mazandaran province) to 87.45 (in South Khorasan province), with the majority (20 out of 30) of provinces falling below the overall mean of 36. IMR estimates for urban areas of provinces vary from 13.95 (in Mazandaran province) to 78.2 (in South Khorasan province). Similarly, IMR figures for rural areas of provinces vary from 9.31 (in Qom province) to 96.74 (in South Khorasan province).

Even larger variations are noted in the case of the 335 sub-provincial districts (Shahrestan) covered by the 2006 census. IMRs for total population of these districts vary from 0 to 108.6 while those for urban and rural areas of the districts vary from 0 to 107.8 and 159.2 per 1000, respectively.

The aim of this paper is to explore and identify socio-demographic correlates and determinants of the noted variations in IMR among Iranian provinces and sub-provincial districts. Variables included in the analysis consist of data on population size, urbanization rate, literacy and level of education of male and female population, economic activity and unemployment rates of male and female population, access to electricity, piped water, gas, telephone, computers and ownership of motor cars. Using factor analysis and multiple regression methods the relative contribution of these variables to provincial and sub-provincial variations in infant mortality will investigated.

66-2

What Role Water and Sanitation Play in Explaining Infant Mortality Rate (IMR): Cross Country Analysis from Asia and Africa

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Climate change is affecting everything surrounding human life including water. Water is one of the most important factors contributing towards sustaining life and livelihood. Thus, Millennium development goals (MDGs) place top priority on ensuring environmental sustainability and improving health by reducing socio-economic inequalities and improving living standard. It is globally recognized that health status has improved over the last fifty years, but unequally. Most of it can be attributed to increased per capita income, technological adoptions, taste and preferences, human resources for health and health infrastructure. A very interesting line of inquiry, not yet empirically tested, is the role of water and sanitation provision at cross country level and also with various level development and socio economic conditions. The main objective of this study is to empirically examine the role that water and sanitation provision can have on infant mortality rate in comparative perspective using world health statistics data for Asia and Africa. Asia has a relatively high and persistent infant mortality rate (IMR) while sub Saharan Africa is even more vulnerable. Infant mortality rate in the world in 2009 is estimated at 46 per 1000 live births while Africa is way ahead at 74 and the case of Sub Saharan Africa is even worst at 80 per 1000 live births. Asia has a figure of 33 infant deaths which is even less than global average, although still high. Applying ordinary least square (OLS) and fractional logit modeling approach this study tries to identify the different factors that are affecting infant mortality rate in Asia and Africa and empirically examining the impact of level of development on IMR. It is estimated that provision of water and rural sanitation, level of development and mother's education helps in reducing IMR. The study helps in developing policy guidelines and channelizes health investment option.

66-3

Does it really Matter Where Women Live? A Multilevel Analysis on Community Contextual Determinants of Postnatal Care in Nigeria

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Most maternal and neonatal deaths occur in the first week after delivery, yet majority of women in Nigeria deliver at home unattended by skilled professional and without adequate postnatal care. Previous studies on postnatal care focus on individual and household level influences, but the role of community attributes has been largely ignored. This study builds on previous studies and examines the influence of community contextual factors on the decisions to seek postnatal care in Nigeria. We used data from the 2008 Nigeria Demographic and Health Survey and a sample of 17,635 women age 15-49 years who had most recent delivery in the five years preceding the survey. Using multilevel regression analysis, preliminary results indicate that individual, household and community contextual factors were important in explaining individual differences in the decisions to seek postnatal care. Religion, parity, exposure to family planning messages and economic status were significant predictors of postnatal care ($p<0.001$). Community contextual factors including community women's education (AOR=1.2, 95% CI=1.13-1.54; $p<0.001$), community hospital delivery (AOR=4.5; 95% CI=3.91-5.33), ethnic diversity (AOR=1.3; 95% CI=1.13-1.55; $p<0.001$) and distance to health facility (AOR=1.3; 95% C1=1.23-1.47) were significantly associated with postnatal care. Women from communities with high female education, hospital delivery and ethnic diversity were more likely to seek postnatal care than their counterparts. Regional variations were observed with women from south west 1.3 times more likely to seek postnatal care than those from north- west. Findings suggest that community interventions to increase the use of postnatal care services should target the uneducated, poor and those women who live in disadvantaged regions. Results also indicate the need for mass media programmes that will educate women about the importance of postnatal care; and provision of social infrastructure in disadvantaged communities to alleviate the problem of distance which is a major barrier to seeking postnatal care.

66-4

Maternal Factors and Child Death at One Rural Setting in Thailand

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Thailand has seen many successful topics in reproductive health outcomes, particularly the chance to be die among children are progressively improving. This study aims to find out maternal characteristics influencing on child death within 5 year period (1996-2000). More specifically, this paper aims to investigate whether household wealth has an impact on child mortality in a rural area of Thailand or not.

This paper reports on data apply from the Kanchanaburi Demographic Surveillance System 2000, which is the stratified sampling survey conducted in Kanchanaburi province,Thailand. It categorized as one area site of INDEPTH network research funded by Welcome trust, London. The analysis is confined to women who had given birth during the last five years preceding the survey in 2000 (n = 3195). The association between experience of child death of mother and the explanatory variables were assessed via bivariate analysis using a chi-square test. The variables were also examined using multivariate analysis (binary logistic regression) to assess the net effect of mother characteristics on child mortality after controlling for the other variables.

Almost one-fifty (1.8%) of the samples had experience of child death. the percentage of child death among mother who had more children were strongly statistically significant affect on child mortality. The net effect explain that there are 3 variables statistically significantly namely, number of children within this 5 years, place of residence and household wealth status. It was explained that women who had more than one child within the 5 years, are 81% less likely to have child death compare with those who have only one child. As the same time, the mother from richer household, they are 91% less likely to have child death compare with mother in poorer household. In term of place of residence, it was found that mother who lived in urban or semi-urban area are 1.4 time more likely to have their children when compare with those mother who lived in upland area.

Child mortality is terrible phenomena for mother and is consider as a poor indicator of national development. This study found that death of children is uncommon in Thailand. No single factor can account for the child mortality in the country; many factors contribute to the problem. After controlling for other variables, this study found that, among many other factors, household wealth was a strong factor of child mortality. Programs seeking to help remedy this problem should focus on the issues identified here regarding the number of children born, place of residence and household poverty, which by those means child mortality will become lesser while the overall well-being of the family can be maintained, in addition to enhance quality of life as well.

67-1

Do Child Health Inequalities Increase with the Improvements in Average Child Health? An Examination of Child Health Inequalities in Indian Case

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In India, economic and social inequalities are inevitable in the context of multicultural society and persistent social hierarchy. Economic and social inequalities have severe impact on health of the population and of children in particular, leading to uneven distribution of health i.e. socioeconomic inequalities in health. In recent times, health of the population in India has improved as a whole and of children in particular. Under5 mortality in India has declined from 79 in NFHS-I to 57 in NFHS-III per thousand live births. Proportion of malnourished children is reduced (Deaton and Dreze, 2009). The percent of malnourished children has declined from 56% in 1992-93 to 46% in 2005-06 (Pathak & Singh, 2011). However, despite improvements in the child health, there have been evidences of widening socioeconomic inequalities in child health attributable to uneven economic development (Wagstaff et al., 2002). The average health of children is improving but the socioeconomic inequalities in child health are also increasing in India (Pathak & Singh, 2011); there are possibilities of linkages between improvements in average health and widening inequalities in child health and this area is relatively unexplored. Therefore, this study is an attempt to explore the correspondence between levels of socioeconomic inequalities in child health and average child health in India.
In this study, full immunization and nutritional indicators namely stunting, underweight and wasting are considered to be indicators of child health. For this purpose, data on child nutrition and vaccination coverage from the three rounds of National Family health Survey is used. The concentration index (CI) is used to quantify socioeconomic inequalities in child health. Wealth index is used as an indicator of socioeconomic status. Average health of children is measured in terms of prevalence for various child health indicators. The relationship between average child health and child health inequalities is explored by comparing concentration indices for different child health indicators with corresponding prevalence.

Results show that concentration index values for selected child health indicators have increased between NFHS-I and NFHS-III both at the national and state level implying increased socioeconomic inequalities in child health. Comparison of prevalence for child indicators and the corresponding concentration indices reveal that at a higher level of child health (low prevalence of malnutrition or higher immunization coverage), corresponding concentration index values are higher. Prevalence of child underweight has decreased from 49% to 42% but the absolute CI values for underweight have increased from -0.11 to -0.17 at India level during NFHS-1 and NFHS-3. Other indicators too depict similar pattern both at the national and state level supporting the notion that at better level of average health, health inequalities are higher. In conclusion, better the average health, higher are the socioeconomic inequalities in health.

67-2

Effects of Distance to Health Facilities and Season on Children's Morbidity and the Care of Sick Children in Rural Bangladesh

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Women in rural Bangladesh usually work at home for gender-based division of labour and fear traveling alone to a distant place. Economic activities in rural areas are seasonal and so are the weather and climate. Both distance from household to the nearest health facility and season may affect burden of morbidity and use of health facilities for sick children.

Examined the effects of distance from rural households to the nearest health facility and season on burden of morbidity and use of trained healthcare providers for treatment of sick children aged <5, controlling for illness and child's characteristics, household economic condition in a rural area of Bangladesh.

Data of this study came from six cross-sectional children's morbidity surveys conducted in different seasons during 2008-2010 in a rural area, where icddr,b has been maintaining a rigorous Health and Demographic Surveillance System (HDSS) for four decades. The surveillance area has a population of 225,000 (in 48000 households) and is divided into 1349 clusters, each of 35-40 households. Five trained female community health research workers visited all households with under-five children in 350 clusters, 70 each, selected randomly, to record morbidity happened in past two weeks and sickness care. HDSS recorded geo-coordinates of all households, health and social institutions and markets in the DHSS area and were used to calculate linear distances from household to the nearest health facilities and distance to the pave road. The household socioeconomic census in 2005 recorded possessions of durable goods to classify households into quintiles. Cross-tab was used to examine seasonal patterns in children's morbidity and use of health services for children sick with fever/cough, acute respiratory infections ARI and diarrhea by distance to health facility and season. Logistic regression was used to estimate the distance decay effect in different seasons, controlling for illness and child's characteristics and household economic condition.

Morbidity in order of bi-weekly prevalence were fever/cough (45%) followed by running nose (22%), skin infections (20%), diarrhoeal diseases (13%), and ARI (7%). Prevalence of fever/cough and ARI was higher by >35% in rainy season (August-October) than in summer (February-April). It was not the case for other types of morbidity. Health care seeking from trained providers was higher in rainy season than in summer for fever/cough and ARI, but not for diarrhea. Short distance to the physician, but not to paramedic increased use of physician in both seasons for treating fever/cough and ARI and decreased use of untrained village doctors and homecare. Other factors associated with sickness care were the child's and illness characteristics and household economic condition.

The findings suggest that expansion of out-reach services of physicians will reduce distance decay and improve child health.

Keywords: sick children, doctors, distance, Bangladesh

67-3

A Comparative Analysis of Mothers' Employment Impact on Physical Health of Children under 5 in Malayer City of Iran in 2011

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Gradual decline in under5 mortality in Iran has been resulted to fewer children's death and reduced socioeconomic disparities effects of their parents on children mortality. Therefore, recent studies tend to focus mainly on children's health, rather than children mortality, and its relation with families', particularly mothers' socio-economic status. Physical health of under5 children with regard to their mothers' socioeconomic status have been analyzed in this study. Using a random sample of 374 children under five years old with employed and unemployed mothers in 2011 in the city of Malayer, this paper addresses the relationships between health indices of children and their mothers' employment either in a paid labor market or in an unpaid housekeeping status. A comparative framework was employed for analysis and discussion of the findings. Binary logistic regression demonstrated a significant relation between Stunting Index (SI) of children with mothers' employment in a paid labor market, but such a relation hasn't been observed with regard to Wasting Index. The length of work hours also seems to have a considerable impact on children's health. We find a significant change in SI for children that their mothers worked for 7 hours or more in a day in comparison to children whose mothers worked less, however, no important relation between SI and type of mother's job was developed. Findings revealed a significant effect of weight at birth on WI index, but, it is obscured after controlling for mother's income. Sex of children has also developed a significant relation with WI among unemployed/housekeeper mothers. Educational attainment of mothers magnifies this relationship. Among unemployed mothers with low level of education, daughters are more likely to suffer low weight than sons. The effects of some other variables, such as types of caring children (institutional/nursery or home care), and birth order, demonstrated no significant relation with WI and SI.

67-4

Young and Poor Mothers: Association with Adverse Birth Outcome

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Pregnancy in young age is a social problem distributed worldwide, has a serious implication on maternal and child health and also associated with risk of poor birth outcomes, including low birth weight and prematurity as well as still birth. Whether the association between mothers age and outcome simply reflects the harmful socio-demographic environment of most pregnant adolescents or whether biologic immaturity. In India teenage pregnancy is a major public health problem showing poor socio-demographic consequences. On the other hand, poverty is the immediate effects of weak national and local economies on birth outcomes are predictable: limited resources typically reduce the availability of good-quality health services, including obstetric and neonatal care. So, keeping this view in concern the main aim of this paper is to find out risk of adverse pregnancy outcome associated with young maternal age and poverty using third round of National Family and Health Survey conducted during the year 2005-06. Bivariate and multivariate analysis has done to find out the correlation between mothers' age and standard of living with adverse birth outcomes. Age of mother is taken as a dependent variable and preterm delivery, low weight at birth baby, abortion and still birth is considered as the outcome variable in the study. Data of the National Family Health Survey-3 shows that 16% of young aged women (15-19 years) have already started childbearing and eastern part of the country having the highest proportion of young mothers. Preliminary findings revels that young mothers have a higher concentration of pregnancy complications birth outcomes like preterm delivery and low birth weight babies. Mothers who are young and poor reports more complications during pregnancy and also report less use of any maternal health care services. The rate of still birth and abortion is also found significantly higher among young-poor mothers. Young mothers develop more perinatal complications like preterm delivery, low weight at birth baby, still birth etc. as compared to adult mothers in the country. In this context, there is a need to promote adolescent reproductive health mainly among poor who are still behind the scene. In India teenage pregnancy is still a rampant and public health problem with poor birth outcomes and it needs a good health care as well as awareness to tackle the problem.

Key words: Birth outcome, still birth, preterm delivery, pregnancy complication, poverty, adolescent.

68-1

Evaluation of Environmental-induced Migration Project in Sanjiangyuan Area in China --Taking Kunlun Immigrants Village as example

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Environmental-induced Migration Project conducted since 2004 by Qinghai Government which aim to protect the worsening environmental situation in Sanjiangyuan Area. Based on the questionnaire survey data in Kunlun Immigrants Village in the suburb of Golmud City, using Cernea's impoverishment risks and reconstruction (IRR) model, this paper analyzed the risks that the migrants may face in the process of resettlement and reconstruction. Besides, environmental risk is also added to the evaluation framework to fit the environmental migration context. The results showed that some risks decreased after the migration (such as homelessness, food insecurity, increased morbidity, loss of access to common property resources and community disarticulation), while some risks are increased (landlessness, joblessness and marginalization). For environmental effect is not time to draw a conclusion yet and need a long term observation. Some policy implications are posed out to improve the process of project planning and policy making.

68-2

Defining and Enumerating Environmental Migrants

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Because much of Asia is prone to environmental and natural disasters and because many areas of the continent have extremely high population densities, Asia accounts for more than four fifths of global environmental migrants.

Defining who is an environmental migrant requires a definition of migration, deciding which aspects of the environment can influence migration and determining that some aspect of the environment is the major cause of migration. Each element of the definition poses difficulties. Furthermore, enumeration of environmental migrants is difficult because the usual instruments for measuring migration (censuses, surveys and administrative records) often do not take into account short-term displacement following natural disasters. Some basic conceptual frameworks for environmental migration are reviewed. Most current estimates focus on displacement resulting from natural disasters but do not take into account voluntary movement impelled by gradual changes in the environment, such as desertification or rising sea level. Current estimates often do not classify environmental migration by distance or consider duration and the propensity to return. Some recommendations are made for strengthening the quality of the enumeration of environmental migrants.

68-3

Population Dynamics and Associated Agrarian, Cultural and Socioeconomic Changes in a Village from the Upper Pulangi Watershed (Mindanao, Philippines)

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In the literature, little is known about the recent upland migration in Asian countries. In the Philippines, almost half of the country is classified as upland following the official definition. Beside the Indigenous People, the migrant population was estimated to be 30% in 1988 (Cruz et al., 1988) and 50% more recently out of the population living in the so-classified forested upland (Li, 2002). The search of livelihood opportunities by urban workers and landless farmers, with a weak enforcement of the forest policy by the government that paved the way for logging activities are among the main drivers of upland migration (Amacher et al., 1998). Because population changes trigger some new pattern of decision-making at individual and collective levels, e.g. the use and management of natural resources, the population movements are directly related with the sustainability of the upland and make their study particularly relevant.

Studied most notably in Latin-America to date (Walker et al., 2002), the objective of this presentation is to investigate the migrant household lifecycle-land/resource use links in an Asian tropical forest frontier context. This study considered that the determinants of decisions made by the people regarding their movement evolve along their life time, with the context in which they are living and according to the former decisions they made. The village-level has been chosen for a finer-grained analysis. An accurate understanding of the establishment in a settling will answer the following questions: Who are the migrants? Why did they migrate and choose a tropical forest frontier? What are their life migratory patterns? To fully understand the population dynamics, the study is completed by an analysis of the still-uncharacterized out-migration. This project sought to reach a global understanding of the agrarian, cultural and socioeconomic changes at the household and village level induced by the population dynamics.

The methodology was designed to collect first-hand information through informal discussions and semi-directive interviews. The case study is a village (Bendum) located in a tropical forest frontier in the Upper Pulangi (UP) valley in Eastern Bukidnon (Philippines). Forests now cover only about 42 % of the UP after being intensively logged from the early 60s to the late 80s. Livelihoods are based mainly on agriculture (e.g. corn, root crops and fiber). Settlement in the village began in the 1970s initially by Indigenous People (lumad), followed by migrants mainly from the Visayas in central Philippines (dumagat). Today, the village comprises around 60 households in 330 individuals.

69-1

Population Dynamics and Climate Change: Indonesia as an illustration

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Population dynamics is a change in the number of population as well as its age-sex and geographical compositions. However, there has not been many discussions on the relationship between population dynamics and climate change. The discussion on climate change has been focused more on technology and economic conditions.

At most, the discussions on the relationship between population dynamics and climate change are limited to forced population movement because of the natural disasters or health of the people. Furthermore, the discussions were often limited to the impact of international migration.

However, population dynamics can play a much larger role in understanding the drivers and impact of climate change, not only limited to population displacement. In turn, the climate change can affect the welfare of the people directly or indirectly through its impact on population dynamics. Understanding population dynamics will help us to find more effective mitigation and adaptation strategies, as population is both consumers and producers of climate change.

This paper shows the complex two-way, circular relationship between population dynamics and climate change, using Indonesia as an illustration. It focuses on the understanding of the size and composition of the population in relation to the behavioural changes that affect climate change as well those that can help adapt and mitigate the climate change. In other words, it examines some possible impacts of population dynamics on climate change and some possible impact of climate change on population dynamics.

As climate change is a recent phenomenon and the severity will only be seen in the next 10 to 50 years, there have been no much data on this phenomenon. Therefore this paper does not focus on what happened in the past. Rather, it examines what may happen on the possible complex circular relationship between population dynamics and climate changes, what lessons can be learned and what policies can be made in mitigating and adapting to climate changes. There are many important factors that affect and are affected by climate change, and population dynamics is one of those many important factors.

As a summary, the main contribution of Indonesian population dynamics in climate change is not on its size, but through its age-sex composition and rising mobility. The role of understanding population dynamics is also very important in making differentiated responses in both mitigation and adaptation to climate change, as Indonesia is a very large and heterogeneous population. Understanding the spatial population changes will contribute to better understanding on the "market", those who are supposed to adapt to climate change, and the production base, those are supposed to produce GHGs.

69-2

Husehold Pollution, Tobacco Use and Low Birth Weight of Babies in India

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Low birth weight (LBW) is caused by intra-uterine growth retardation (IUGR). The pollutants present from burning of biomass fuel and tobacco use accounts for IUGR and thus LBW. The incident of LBW is high in developing countries, including India. In India, women rely on biomass fuel for daily use of cooking and heating and thus are exposed to household pollution. Moreover, the prevalence of tobacco use is also high in India. These two factors either in isolation or in combination may cause the LBW of babies.

Therefore, the study intends to analyze the causal relationship amid pollution within the household, in terms of pollution originating from burning of biomass fuel and tobacco use, and the occurrence of LBW in India. At the same time, it also examines factors affecting the LBW in India.

The analysis is based on 20,946 currently married women, included in India's National Family Health Survey (NFHS-III) conducted in the year 2005-06. The birth weight of babies has been categorized into standard birth weight (2500 gms. and more), low birth weight (1500 to 2499 gms.) and very low birth weight (500 gms. to 1499 gms.), which is the response variable. The predictor variables are pollution in the household, smoking status, age, residence, education, religion, caste, household structure, wealth index, birth in the last five years, and iron tablets taken during pregnancy. To visualize pollution within the household, use of safe fuel with improved stove which is connected to chimney have been computed as household not exposed to pollution or otherwise; and use of tobacco in any form has been considered as exposure to tobacco. For the analysis, cross tabulation and multinomial regression analysis have been used.

The result indicates that percentage of LBW is the highest in Haryana (32%) followed by Punjab (24%), and percentage of very LBW is the highest in Uttar Pradesh (5%). Furthermore, incidence of LBW and very LBW is high when household is exposed to pollution as well tobacco use. The multinomial regression analysis also establishes that women, living in households, exposed to household pollution are almost one and a half times (RRR = 1.43) and 1.32 times at the risk of delivering LBW babies and very LBW babies than women not exposed to household pollution respectively. Also, women who are using tobacco are 1.56 times and 1.82 times at the risk of delivering LBW babies and very LBW babies compared to women who are not using tobacco. Along with other predictor variables, women in the age group 20-29, women belonging to SC category, women from Muslim religion, women using tobacco, women having more than two children, and residing in rural areas are statistically significant contributors for the occurrence of LBW.

69-3

Air Pollution: An Overlooked Cardiovascular Disease Risk Factor in South Asia?

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Air pollution is a growing problem in heavily populated areas in South Asia. The main contributors to this problem are the continued use of biomass fuels such as wood for cooking and heating as well as the largely unregulated growth of urban areas, which has led to unprecedented increases outdoor air pollution. At the same time, cardiovascular diseases are major and growing contributors to mortality and morbidity in South Asia. Recently, exposure to elevated levels of air pollution has been linked to cardiovascular disease (CVD) events, which could have critical ramifications for South Asia. Nonetheless, little is known about the effects of air pollution in these regions, which is a critical gap in the literature.

We evaluated the available evidence regarding air pollution as a risk factor for CVD in South Asia (Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka). A literature search was conducted using PubMed and Web of Science. The key search terms used were “air pollution” and “cardiovascular diseases” and “Asia”. The search was also conducted with the first two search terms in combination with each of the above listed countries. This yielded 189 English language articles, published between 1990 and 2011. We then eliminated studies conducted in East Asia (China, Hong Kong, Taiwan, Thailand, Korea and Japan), which resulted in 13 studies. The subsequent elimination of letter and abstracts in addition to those studies related to smoking, biological processes and animals resulted in six articles.

Four studies, all conducted in India, examined the effects of outdoor and indoor air pollution on cardiovascular diseases. The remaining two were reviews. In a study in West Bengal, women who used biomass in homes had a higher prevalence of hypertension. A higher prevalence of cardiovascular symptoms was also associated with industrialized areas in the Punjab state of India. Likewise, emergency room visits for acute coronary events were associated with elevated levels of pollutant in Delhi. Another study also in Delhi also demonstrated a significant relationship between cardiovascular disease and the use of traditional fuels.

One of the most important outcomes of this investigation was the lack of research conducted on CVD and air pollution in Southern Asia. The association of both indoor and outdoor air pollution with the increased risk of cardiovascular disease has been clearly demonstrated in these studies, yet very few studies have been conducted in the rapidly growing and urbanizing areas of South Asia. As overburdened health systems in these regions are facing the burdens of an aging population, increasing air pollution levels and CVD rates, clearly further investigations are needed. This current gap in research also emphasizes the necessity of policies, programs and interventions to urgently address these issues in these regions.

70-1

Impact of Climate Change on Health of Urban Poor in India

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In recent years, climate change has almost becomes synonyms with development of environmental hazards adversely affecting the living being, flora and fauna. On human life, its adverse affect is particularly large on those segments of populations where the current burden of climate-sensitive disease is high. One such category is urban poor which is characterized by cramp living spaces, lack of sanitation and safe drinking water, poor and unhygienic environmental conditions, poor socio-economic status etc. As a consequence their major health indicators like, morbidity (due to communicable as well non-communicable diseases) and child death rate are higher than other sections of population.

Changes in precipitation patterns and water cycle are likely to further aggravate the existing problems of water quality and supply in these urban areas especially in big cities. Warmer and/or wetter period of breeding due to (global) warming will provide near optimal conditions for expansion of mosquito-borne diseases as puddles, in which malaria carrying mosquitoes breed, are created either by excessive rainfall. Such conditions will increase contaminated water and food-borne diseases like cholera, typhoid, diarrhea, hepatitis, and gastroenteritis. For example, India is being visited by environment born infections like, swine flu, chicken guinea, dengue etc. almost every year during and after the monsoon, with increasing intensity. Its impact is particularly large on the people living in slums in big cities.

Deeping of the water scarcity would jeopardize whatever little sanitation exists in slums and shanty towns leading to increase in contamination of water and associated diseases. Climate changes are also likely to increase the prevalence of non-communication diseases particularly the life style diseases like, hypertension, respiratory disorder etc.
In this paper, we are assessing the scientific evidence of fluctuations in temperature, rainfall, water scarcity etc. in select cities and their effect on health outcomes for urban poor.

Key words: Climate change, urban poor, communicable and non-communicable diseases

70-2

Effects of Educational Attainment on Climate Risk Vulnerability

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In the context of still uncertain specific effects of climate change in specific locations we stress that education should be seen as a central factor that both increases coping capacity with regard to particular climatic changes and improves the resilience of people to climate risks in general. Our hypothesis is that investments in universal primary and secondary education around the world are the most effective strategy for preparing to cope with the still uncertain dangers associated with future climate. The empirical evidence presented for cross-country time series of factors associated with past natural disaster fatalities since 1980 in 108 countries confirms this overriding importance of education in reducing impacts. We also present new projections of populations by age, sex and level of educational attainment to 2050 which provide an appropriate tool for anticipating societies' future adaptive capacities based on alternative education scenarios associated with different policies.

70-3

Understanding Social Barriers to Climate Change Adaptation: Phang Nga Province (Thailand) Case Study

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The necessity to adapt to climate change has been widely debated among academics, policy makers and the public. There are however limits and barriers to undertaking adaptive actions ranging from physical and ecological limits to social barriers. While limits in physical and ecological systems require technological innovations and economic resources to overcome, social barriers can be dealt with by changing perceptions, attitudes and behaviours. Understanding social barriers to adaptation thus is crucial in promoting adaptive capacity.

Social barriers to adaptation are embedded in three elements: cognitive, normative and institutional dimensions (Jones, 2010). For the cognitive element, a decision to undertake adaptive actions depends on individuals' perceptions and awareness of climate risks and their assessment of the effectiveness of and self-efficacy in adaptation actions. Likewise, cultural and social norms influence how people perceive, interpret and think about risks and in turn shape individuals' actions. Institutional inequities and social discrimination also influence climate vulnerability and adaptation. Since individuals have unequal access to resources, the climate impacts and adaptive capacity are stratified across age, gender, income, ethnic group and education.

Using the Phang Nga region, a coastal area in the south of Thailand, as a case study, this paper aims to explore social barriers to climate change adaptation at the individual- and community-level. We chose the Phang Nga region because of its past experience of heavy losses from the Indian Ocean Tsunami in 2004, which in turn should have raised awareness of climate risks among its population. Locating on the coast, the region is exposed to various climate risks such as rising sea-level, storm surge and floods. The paper focuses on investigating three main research questions:

1) What are social barriers to adaptation?
2) How can cognitive perceptions and ability predict adaptation actions and how much can socio-economic factors explain the variation in cognition on climate change?
3) How do community characteristics play a role in adaptation?

The study is based on primary and secondary data sources. Using the local area census data, a statistical analysis is performed in order to identify population distribution by age, sex, education, occupation and geographical residence. Based on these results, we identify a stratified sample for interviews. The fieldwork is scheduled to be carried out in the Phang Nga region in January - March 2012. The interview methods include both semi-structured interviews and focus group interviews of a) stakeholders (e.g. community leaders, business association) representing different industry and place of residence and; b) focus group interviews of individuals differentiated according to age, gender, ethnicity, education and occupation. This will be a main data source used to identify social barriers to adaptation and explain underlying cognitive ability and socio-economic factors influencing adaptive capacity at the individual- and community-level.

71-1

How does Population Aging Influence the Household Consumption of Energy?--Evidences Based on Household Survey Data in China

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China has stepped into the aging society since 2000, and the proportion of the elderly aged 65+ rose quickly to 8.9% in 2010. Population aging has been expected to change the household energy consumption, as the income level, consumption propensity and life styles of the older generation differ greatly from the younger generation. Several studies have explored this issue using time-series datasets in Japan, U.S. and China, while they did not control for economic development and urbanization level of the countries. Very few studies on this issue are based on household-level datasets so far.

This paper aims to investigate into the impact of population aging on household energy consumption and energy choice based on micro datasets. It will further explore the mechanism through which population aging plays a role in changing household energy consumption.

Chinese Family Panel Survey (CFPS) in 2008 and 2009 provides a good opportunity to target this issue, which contains detailed information on employment, income, consumption and housing of family members in Beijing, Shanghai and Guangzhou. Based on the 2008-2009 panel data, this paper will apply fixed effects models to explore the causal effect of household age structure on daily life energy consumption, controlling for the demographic and socio-economic factors. Household age structures are measured by the proportion of elderly individuals aged 65+ as well as the average age of household members. Daily life energy consumption can be measured by three variables in the questionnaire: (1) electricity consumption per capita in the last month; (2) transportation fees per capita in the last month; (3) whether the fuels used in daily life are conventional energies such as straw and firewood or quality energies such as electricity and gas.

This paper will further examine two mechanisms through which household age structure plays a role. First, aging could have indirect impacts through an associated decline in household size and consequently a loss of economies of scale in energy use at the household level. Second, elderly people tend to have less income and lower consumption propensity, and thus spend less energy.

Investigation into this issue will provide us a better understanding on the energy consumption in an aging era and improve the development of credible projections of energy demand.

71-2

Well-Being and the Macro-economic Effects of Investing in Cleaner Air in India

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Along with rapid economic growth in the past decade, India has experienced increases in air pollution, which cause a myriad of harmful health effects. We focus on one of these pollutants, fine particulates (PM2.5) that are especially harmful to human health. In order to determine the effects on well-being of policies to lower PM2.5 concentrations, we calibrate an overlapping generations model of economic growth to the Indian experience from 1971 to 2001 and compute the effects of increases in spending on air pollution abatement on GDP growth, the number of deaths, and on the human development index for the period 2010-2030. The model allows improvements in health to affect economic growth in a number of different ways including: (1) decreasing the number of deaths, and therefore changing the age structure of the population, (2) decreasing days of work lost due to illness, and (3) changing the age pattern of personal savings. We consider two scenarios of PM2.5 abatement, roughly corresponding to current Indian legislation and current German legislation. The net effect in both cases is that GDP growth is virtually unaffected, the number of deaths is reduced, and the human development index is higher. In India, air pollution abatement investments increase well-being.

71-3

Population Dynamics and Climate Change in Indonesia

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The role of populatoin in the causes and consequences of climate change needs to be better understood. While much of the public debate focuses on population numbers and rates of growth, human populations are in fact complex systems and much of their complexity is involved in the way they interact and are coupled with ecosystems. This paper examines the ways in which population dynamics influence greenhouse gas emissions in a large developing country, using the "Kaya identity" as a kind of proximate-determinants framework to organize the analysis. The paper reports on a preliminary study I have completed on population and climate change in Indonesia (with support from the Australian Research Council and UNFPA); data from a selection of other countries are included for comparison.

The paper concludes with a brief discussion of the role population-related policies could play in a country's mitigation and adaptation strategies, and the role of population dynamics in a broader social-science understanding of anthropogenic climate change.

71-4

Water Challenges with Population Growth: Alternative Strategies Adopted in a South Indian City

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Bangalore, the capital city of Karnataka, is India's sixth most populous city and fifth most populous urban agglomeration. Bangalore with its strategic location as well as congenial climate attracts people all over the country. Bangalore is also the third most popular city to dwell. Of the many challenges that urban Bangalore face, water is one of the critical issues. Millennium development goal aims at halving proportion of the population without sustainable access to safe drinking water and basic sanitation by 2015. Bangalore gets water from river Cauvery, about 100 km away incurring huge financial costs. Bangalore Water Supply and Sewerage Board (BWSSB) have been adopting various initiatives to improve its services and lately conservation is one of its focus areas. In view of this, Rain water harvesting (RWH), has been made mandatory for households in Bangalore city with the site dimension 40/60 and above with the implementation of Bangalore Rainwater Harvesting Regulations, 2009.

In this backdrop, a study was carried out to explore the emerging trends in Rain water Harvesting, adoption and implementation in Bangalore city. The study focused on capturing perceptions of people, socio, economic and institutional constraints besides understanding the roles and limitations of existing institutions. Two groups of households were selected, one experimental group (households with RWH) and the other control group (households without RWH) within the same area. The findings reveal that 94 per cent of the households adopted RWH out of compulsion; up to 81 percent of the households have adopted ground water recharge, however, did not follow the specified technical procedure indicating harmful effects on ground water quality. 81 percent of the households revealed ignorance of technical procedures and cost aspects resulting in exploitation by plumbers. The respondents from the control group, although from the same area, were against adopting RWH due to financial constraints, lack awareness, 12 percent opined RWH was not necessary, 82 percent were not willing to respond as they feared that they had not adopted RWH. On the other hand, BWSSB has been trying hard to promote RWH through several awareness program methods besides making it compulsory.

The study reveals that although RWH is an important initiative, there were several gaps in the process which needs to be strengthened for RWH to be a positive initiative. There are several institutions involved in managing ground water but there is no coordination between them. The processes in adopting RWH had several gaps in terms of implementation making it more a compulsion. There has been scepticism about adopting RWH as a blanket policy throughout the city as the groundwater availability is not an issue in the core of the city due to infiltration of waste water.

72-1

Shortage of Labor Force in China: The Lewis Turning Point or the Trough of Easterlin Demographic Swings?

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This paper makes a new interpretation of the phenomenon of "labor force shortage" in China from a unique perspective of demographic swings. The demographic swings have caused dramatic structural changes of working-age population: on the one hand, working-age population is keeping ageing gradually and the proportion of the younger workers is declining, while the employers insist a wasteful way of employment, which means that they only employ migrant workers that are both young and vigorous. This contradiction leads to an imbalance of supply and demand of young workers. On the other hand, the number of workers newly entering into the labor market is declining every year, which undermines the company's paths for annual turnover of workers. What is more, the higher education creates the first profession division, the expansion of which results in the decline proportion of manual workers in the young workers that has already been shrinking. Therefore, the shortage of migrant workers is not a sign of the Lewis turning point which is described as the decreasing migration flows from rural areas to urban due to the vanishing of the surplus labor force in rural areas, but an issue associated with the overall reduction in size of young manual-worker population caused by demographic swings and the enlarging enrollment of university. It's a vivid representation of Easterlin's point of view: the fluctuation of population exerts a great influence on the economic and social development.

72-2

The Forecasting of China's Effective Labor Force, 2010-2100

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The previous studies on the economic impact of China's labor resource mainly focused on the size and structure of working-age population while labor quality was ignored. With the development of education, training and health, the productive capacity of China's labor has been improved greatly, and labor quality will play a more and more important role in China's economic growth during next few decades. Based on Lucas's effective labor force model, this paper develops an effective labor force model which takes both economically active population and labor quality level into consideration. After forecasting working-age population dynamics over the period 2010-2100 by cohort-component projection and scenario analysis, this paper analyses the changing of the labor participation rate and labor quality level. Finally, by using the above model, this paper forecasts China's effective labor force dynamics over the period 2010-2100.

72-3

Occupational Mobility of Indian and Chinese Immigrants in the United States: A Comparative Study

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This paper measures and thereby compares the extent of occupational upgrading/ downgrading of Indian and Chinese immigrants in the U.S. labour market. The main focus is to find out factors affecting labour market performance of these two groups of immigrants. A comparison is made between their current occupational status, and that before migration. Data have been used from New Immigrants Survey, 2003. The occupational ranking is formulated as a function of variables: occupational category, years of education and wages. Occupational mobility is measured in terms of whether the individual's current job is of higher/lower ranking than that of his/her last job before migration. A Multinomial Logit Model predicting this mobility is estimated. Results show that Indian immigrants are in a better position in the U.S. labour market than their Chinese counterpart. Occupational ranking before migration has a consistent and strong association with probability of experiencing success in the U.S. labor market. Education obtained in the U.S. is more highly rewarded than that from the source-country. The variables for the visa-class of admission show that, overall, employment-based immigrants have higher probabilities of having a better occupational status than others. Also, networking plays an important role in individual's occupational success. In the context of an increasing concern for the well-being of international migrants and also in order to achieve an efficient allocation of skills leading to an efficient labour market, the policy recommendation should take care of minimizing occupational downgrading of immigrants, by identifying the vulnerable group and their specific shortcomings.

72-4

Labour Market in Urban India after Liberalization: A Regional Perspective

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The expansion and creation of employment opportunities have been the unstated objectives of economic reforms being followed since the early 1990s in India. Generation of productive and gainful employment with decent working conditions is viewed as a crucial strategy for “inclusive growth”. In this context, the paper attempts to give an overall picture of the Indian urban labour market, and the major trends the labour market had followed for the period 1993-1994 to 2007-2008 among 15-59 age groups across 18 major states using National Sample Survey (NSS) unit level data. It also examines using Workforce Participation Rate (WPR), Labour Force Participation Rate (LFPR), Unemployment Rate (UR), Employment Status and Non-participation in the labour market with respect to gender, education, and social category.

Our analysis of LFPR, WPR and Unemployment Rate over 1993-93 and 2007-08 suggests that at all India, no major shift had been observed in these indicators. In the year 2007-08, male LFPR was 83.2 percent whereas female LFPR was only 21 percent. Female LFPR was found highest in Kerala whereas Delhi, Assam and Gujarat had reported maximum gender gap in LFPR.

Between 1993-94 and 2007-08 the employed workforce of India defined by their usual status in principal and subsidiary activities at an annual rate of approximately 2.4 per cent. WPR among 15-59 age groups decreased marginally in case of urban males as compare to females. For urban persons with educational qualification graduate and above, WPR had has also declined. In not literate category, Bihar reported lowest WPR in the year 2007-08.

The unemployment rate was found to be highest for females by UPSS and CDS. It had considerably come down in 2007-08. On the other hand unemployment rates for males remained same in 2004-05 as well as 2007-08 by UPSS approach but it had come down in 2007-08 using CDS approach. As per UPSS estimates, urban employment rates were found minimum (below 2.9 percent) in Haryana, Gujarat and Andhra Pradesh whereas it was the highest in Kerala for both male and female categories.

Level of unemployment rate among primary educated persons was also found low and it was 2.4 during 2007-08. Among graduates and above category unemployment rate had always remained high and it came down to 7 percent in 2007-08 from 8.4 percent in the year 2004-05. Urban areas of Bihar, Jharkhand, Kerala, Orissa and West Bengal had reported very high unemployment among educated persons and this is the reason why these states had high out migration from urban areas
In this way, regional disparity in urban labour market is clearly visible among major state. Positive impact liberalization still needs further expansion towards deprived states and social communities.

72-5

Labour Force and Employment in Bangladesh: Changes between 2000 and 2010

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In a developing country like Bangladesh, employment provides the critical link between economic growth and poverty alleviation, because the vast majority of the people depend on employment as their only source of livelihood.

The objectives of this paper are to examine changes over the past decade in: (i) labour force participation and its determinants; (ii) structural aspects of labour force in terms of: industry, occupation and employment status; and (iiii) unemployment and underemployment in Bangladesh.

This paper is based on data from the Bangladesh Labour Force Surveys of 1999-2000, 2002-03, 2005-06 and 2009-2010 and other relevant materials. Bivariate and multivariate analyses have been undertaken.

Between 2000 and 2010, the total labour force increased from 41 million to 57 million. The labour force participation rate increased from 55% to 59%. The probability of labour force participation is lower in rural areas, among females, those in the younger and older age groups, and those with relatively higher education.

Total employment increased from 39 million to 54 million. Most of the increase in employment is in the low-productivity, low-wage, informal sector.

There has been no pronounced change in the occupational and industrial structures. Agriculture, forestry and fisheries are the primary occupation and the primary industry of about half of the employed population. The relative share of the manufacturing sector continues to be quite low. At the same time, the employment structure continues to become more service sector oriented, predominantly outside of the formal sector.

There has been no pronounced change in the relative shares of different employment status categories: self-employed the major employment status category among males and unpaid family workers the major employment status category among females.

About one-fifth of the labour force is under-employed, being higher among females and in rural areas. Most of the increase in employment over the past decade in Bangladesh has been in the low-productivity, low-wage, informal sector. There has been no pronounced change in the occupational and industrial structures and in the relative shares of different employment status categories. There is considerable underemployment.

The current employment generating capacity is unable to provide employment to those un- and underemployed and absorb the incremental labour force in productive employment. Over 2 million new jobs will have to be created annually over the next decade, indeed, twice the rate of job creation between 2000 and 2005. This is, indeed, a big challenge for Bangladesh. Therefore, Bangladesh should give top priority to higher and more employment intensive economic growth.

73-1

Socio-economic Determinants of the Rising Rate of Cesarean Section Delivery in Transitional China

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The rate of caesarean section delivery (CSD thereafter) has risen both in developed and developing countries in recent year, and China has experienced the most rapid increase across the world in the past two decades, over 40percent in the 1990s (Huang 2000; Xin and Ji 2008) and over 50 percent in the early 2010s, particularly in urban areas (e.g., Xiong and Cheng 2009). The average disguises tremendous regional disparities. While the rate is low due to accessibility to health facilities and resources, it could be much higher in cities.

While the astonishing rate of CSD has caught the attention of relevant government agencies and health scholars, social scientists tend to render this issue a "medical" concern. As is now more widely acknowledged, however, CSD may be of pressing socioeconomic significance, linked to maternal care, fertility policy, level of economic development, provider legal concerns and financial incentives, and individual attitudes towards vaginal and caesarean delivery methods. Given the high rate of CSD for non-medical needs and its potential negative consequences to the mother and children, an analysis from socioeconomic perspective should emerge as one of the major tasks of family planning work and health practice. Only when the determinants of CSD are clarified, can we develop programs to curb the continuously rising trend, reduce the rate of CSD for non-medical need and suggest to women to select the most appropriate methods to deliver births.

This paper investigates factors associated with CDS for non-medical need in China in the 2010s, focusing on socioeconomic, institutional, attitudinal, as well as policy factors at individual, institutional and macro levels that may drive pregnant women to select CSD method. It draws on three sources of data. The first comes from the 2003, 2008 and 2011 National Health Service Survey; the second from the China C-section Survey, which is specifically designed to examine the socioeconomic determinants of C-section, and the third from focus group discussion and in-depth interview collected in the second survey areas. By integrating these data sources, this paper is able to document the trend, occurrence, and patterns of CSD in the 2010s, and to address the following issues: why do people select CSD when no such need presents? How may multiple non-medical factors at multiple levels be related to the rising trend and high rate of CSD in a context of socioeconomic transformation and demographic transition? What might be policy implication? By comparing women who used CSD and those who gave vaginal births, and by adopting mixed methods, this work will substantively shed lights on our understanding of above issues, and serve as a foundation for the promotion of vaginal delivery when no medical indicators are present.

73-2

Effect of Obstetric Complications and Previous Pregnancy Outcome on Latest Pregnancy Outcomes in Uttar Pradesh, India

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India has seen a fall in Maternal Mortality Rate (MMR) by 59 % between 1990 and 2008; however, still it is a home to the highest number of women dying during childbirth across the world. India alone contributes to more than 50 % of total burden of maternal mortality and morbidity in south Asia and 'accounting for one-quarter of maternal deaths worldwide and a substantial proportion of them are at risk of serious obstetric complications and moreover, most of them are suffering with multiple complications. The most recent statistics in India reveals that Uttar Pradesh is continued to be the state with highest maternal deaths indicate well above the national average of MMR of 407 per 100 000 live births. Commensurate to greater maternal mortality, Uttar Pradesh also comprises the highest number of women suffering with obstetric complications. However, till now, an unexplored part but pervasive issue in low-income setting like Uttar Pradesh in India is 'how far the obstetric complications have an effect on the pregnancy outcomes'.

This study is an effort to examine the effect of obstetric complications in latest pregnancy and adverse pregnancy outcome in previous pregnancy on latest pregnancies outcome among currently married women (age group 15-49) in Uttar Pradesh.

The present study used the data from District Level Household Survey (DLHS-3, 2007-08) for the analyses. The study employed bivariate, trivariate analysis and Cox proportional hazard models.

The results of the study more than support the hypothesis that obstetric complications in latest pregnancy and adverse pregnancy outcome in previous pregnancy influence the outcome of latest pregnancy. Cox Proportional Hazard Model estimates reveal that the relative risk of having still birth is significantly higher among the women with any pregnancy complications (*RR*=1.52, *p*<0.001, *SE*=0.15) compared to women with no pregnancy complications *(RR*=1.00). The similar results were also found for miscarriages. The result also reveals that the relative risk of having a spontaneous abortion is six times (*RR*=6.03, *p*<0.00; *SE*=0.08) more among woman who had spontaneous abortion in previous outcome than those who have live birth as a previous pregnancy outcome (RR=1.00). The adverse pregnancy outcome in previous pregnancy shows the largest risk factor for likelihood of getting similar type of adverse pregnancy outcome in latest pregnancy.

Proceeding to earlier evidence on obstetric complications and its effects, this study fills a critical gap in the field of maternal and reproductive health research, fostering captivating evidences for hypothesis 'obstetric complications and previous pregnancy outcomes have a significant effect on latest pregnancy outcomes'. The findings provide the number of captivating insights for health policy interventions in terms of prevention of obstetric complications to avoid the adverse pregnancy outcome in Uttar Pradesh, India.

73-3

Childbirth Planning and Preparation: Findings from the Qualitative Assessment of the Bangladesh Maternal Mortality Survey (BMMS), 2010

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Only 27% of Bangladeshi women deliver with skilled birth attendants. Antenatal care (ANC) serves as an opportunity for health workers to inform women about essential birth preparations, particularly related to childbirth complications. In order to increase use of skilled attendants and improve birth outcomes, it is important to understand how women view birth preparedness and plans they make prior to delivery.

As a sub-component of a nationwide maternal mortality survey, in-depth interviews was carried out between March 2010 and February 2011 with 20 women in their third trimester of pregnancy to assess what preparations they had made for childbirth. When available the pregnant woman's husband, mother and mother-in-law were also questioned.

Women attended on average two antenatal visits, with approximately one-third never receiving ANC. Health workers providing ANC consistently failed to give information on pregnancy-related complications or advice on place of delivery. The vast majority of respondents expected to deliver at home with a traditional birth attendant (TBA) because they assumed the delivery would be normal, had confidence in the TBA, and wanted to avoid a facility delivery. Despite the fact that women also know that delivery can be risky, most women failed to discuss childbirth with household decision-makers. Women expressed multiple reservations about giving birth in a health center, with most frequent concerns relating to costs and shame in exposing private body parts to male health workers. While all women indicated that they would go to a health facility if complications occurred, virtually no preparations had been made in regard to transport and savings to pay for emergency care.

Although childbirth is viewed as a dangerous time, minimal preparations are made prior to delivery. ANC health workers often fail to provide valuable information for birth planning. Efforts are needed to improve ANC so that women and their families are better prepared to respond to delivery complications.

73-4

A Search for Path of Linkages between Maternal, Child Health Care and Contraceptive Dynamics in India: A Calendar Analysis

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As we cannot consider a child health program without immunization, women's health without family planning is also incomplete. Research has shown that fertility has declined in Indian settings where there has been simultaneous proliferation of contraceptive use. Most of the researchers have tried to show the impact of utilization of antenatal care services on ever-use of family planning methods. Nevertheless, research investigating the nature of this relationship is not well understood, in the sense that ever use of contraceptive is a weak indicator to capture this aspect. Although the conceptual case for a relationship between MCH service and contraceptive use is compelling, the relationship has still been somewhat murky. In the present study in the Indian context, with the help of a reproductive calendar which is first time collected retrospective monthly information about contraception (available in National Family Health Survey 2005-06), concerted attempt will be made to examine whether utilization of maternal and child health care services is one of the major networks for adoption of contraceptive use. We will examine the type and duration of specific contraceptive use, after utilization of MCH services. Research Hypotheses of this study is that continuity of contraceptive use is high among women who receive postnatal care.To fulfil the propose objective only those women will be selected, who have given at least one birth and had resumed menstruation. About 683 (8.01 percent) zero parity women were using any form of contraceptive method in recent NFHS-3 survey. Preliminary analysis shows that the intensity of antenatal service and institutional delivery Health service use does have a causal impact on subsequent spacing contraceptive continuation, even after controlling other important socio-economic and demography factors.

73-5

Maternal Mortality: Is Gender a Determining Factor?

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A number of studies have been conducted in the past 20 years that examine the medical records to capture the immediate biological causes of maternal deaths. The focus has been on various delays related to seeking appropriate medical help for an obstetric emergency; reaching the facility; and receiving adequate care at a facility. The literature is also huge on issues of lack of empowerment of women in the households, violence against them during pregnancy, sexual violence, all pointing to the vulnerability of women. But the gender issue or personal, familial, socio-cultural and environmental factors contributing to maternal deaths are rarely studied. There is hardly any literature that alludes to the dispensability of a pregnant woman or a mother.

Based on data collected on 28 maternal deaths from hospital records, if any, interviews with relatives of diseased women and of village level health workers (interviewed 2-6 months after the death), I propose to construct social autopsy of all maternal deaths.

The data are from a tribal belt of South Gujarat, India, where an NGO has been tracking all maternal deaths in 168 villages and nearly 300,000 population since 2003. In each village a local woman, functioning as a front line health worker, is trained to register each pregnancy, ensure that the pregnant woman receives antenatal check ups, help in birth preparedness, provide dietary advice, and identify complications and advice to consult higher level care. The records of the outcomes of all pregnancies enabled us to prepare the list of the maternal deaths in the area since 2004.

A tool was prepared to collect basic demographic information (woman's age, parity, caste, marital status, place of residence, whether died at natal or conjugal home, whether died during pregnancy, birth or after birth, whether the child, if born, survived). An interview guide was prepared for qualitative data for respondents (family members, neighbours) to record illness symptoms at various stages of pregnancy until the time of woman's death. Information on the entire pathway to treatment and care sought was collected to understand the medical and social circumstances surrounding death and why delays occurred or why a decision was not taken early enough to go to a health facility. The information from all sources will be triangulated to understand the determinants of maternal deaths.

The paper will particularly delve into examining gender construct of maternal health and mortality. It will examine social factors, such as family support system, societal norms; cultural factors reflected in interactions between spouses, use of language; and economic factors such as poverty, articulated in statements such as "a sickly mother would continue to be a burden on the family for a long time" or "another wife can be brought for the son".

74-1

Assessing Maternal Health Care Utilization in Post-Conflict Afghanistan: Evidence from Latest Mortality Survey, 2010

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In Afghanistan, the health status in general and for women in particular has been seriously affected by long-term conflict, coupled with poor socio-economic status and difficult access to healthcare services. The Afghan health care system was severely hit during civil war (1989-1992) and it experienced greatest setback and was eventually destroyed during Taliban regime. This long term ‘public health disadvantage' is reflecting in terms of one of the poorest maternal health care indicators. According to the recent estimates, the Maternal Mortality Ratio(MMR), is highest in the world reported as 1400/100,000 (95%CI:740-2600) live births in Afghanistan. As per the "State of the World's Mothers Report-2011", Afghanistan has yet again been ranked (164) the worst place in the world to be a mother in global mothers' index ranking.

Utilizing the data from the Afghanistan Mortality Survey (AMS)-2010, this study assesses the utilization of maternal healthcare services for the women who gave births in the last five years preceding the survey. Three components of maternal healthcare service were measured: at least 4 ANC visits, safe delivery, and postnatal care. Considering the standard framework on causes of maternal mortality, selected socioeconomic and demographic factors were included as the predictor variables. Bivariate analyses including chi-square test to determine the difference in proportion, and logistic regression to understand the net effect of predictor variables on selected outcomes were applied.

Findings show unacceptably lower coverage of all three maternity services utilization. The utilization of at least 4 antenatal care visits was substantially lower at 16% among Afghani women. Just 34% women undergone for safe delivery and three in ten utilized postnatal care. Urban women were almost three times as likely as rural women to gone for at least 4 ANC visits (34% vs. 12%) and safe delivery (70% vs. 25%). The poor-rich gap in safe delivery (60 percentage points) and postnatal care (40 percentage points) was enormous. Factors such as place of residence, women's education, wealth status, region of residence and index of remoteness emerged as the most significant predictors of maternity services. Along with other known predictors, the remoteness index based on the cluster level indicators like; phone signal availability, a paved road, presence of the highest medical facility, highest level of school and availability of daily necessities etc. significantly affect the maternity services utilization. Just one in five women from the most remote cluster utilized safe delivery compared to women who were from least remote areas (60%).

The financial and intermediate barriers hindering poor and uneducated women to access healthcare should be reduced. In addition, special efforts are required to reach the remote places and improving the basic as well as health infrastructure to address the health needs of Afghani women.

74-2

Quality of Delivery Care in Public and Private Sector Facilities: Perspectives of Women in India

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Private sector health facilities remain the primary source of health care for the majority of households in India. The most commonly cited reason for preferring private sector facilities to public sector facilities is the poor quality of care in the latter. However, little is known about the extent to which quality of care is better in private than public sector facilities. This paper presents evidence on women's perspectives of quality of delivery care in public and private sector facilities.

A cross-sectional study was conducted among women aged below 35 years who had delivered in the one year preceding the interview in Rajasthan, India. The paper draws on data from 2,944 women who had delivered in a public sector (primary health centre, community health centre or district hospital) or a private sector facility.
Quality of delivery care was captured by ten indicators reflecting the adoption of healthy or harmful practices during labour and delivery and women's access to providers, supplies and a respectful and clean facility.

Findings indicate that the quality of delivery care is unacceptably poor. First, best practices during labour and delivery are rarely followed. Only a little over one-quarter of women reported that the provider had conducted all essential examinations when they were admitted in the hospital for delivery and one in ten women reported that the provider had used oxytocin for the management of the third stage of labour. Three-fifths of women reported that they were discharged from the facility after at least 24 hours of delivery. Second, harmful practices during labour and delivery are widespread. One-third of women reported that the provider applied strong fundal pressure before they delivered; three-quarters reported that the provider gave them an injection (likely oxytocin) to speed up the delivery. Finally, limited access to medicines and other supplies and to a respectful and clean facility for delivery remains a major concern.

Of women who had delivered in a facility, three-quarters had delivered in a public sector facility and the rest in a private sector facility. Private sector facilities scored better than the public in terms of availability of provider, behavior of providers toward clients, access to medicine and other supplies, access to a clean and respectful facility for delivery and the conduct of essential examinations. However, they scored worse in terms of discharging women from the facility soon after delivery, use of injections to speed up delivery and allowing the escort to remain with women during delivery.

Our findings present a mixed picture with respect to the quality of care in private compared to public sector facilities. Efforts are needed to enhance the quality of care in the public sector facility and to ensure that women who deliver in private sector facilities do receive quality care.

74-3

Utilization of Maternal Health Services in Rajasthan: How Far had Vulnerable Women Benefited from the Janani Suraksha Yojana?

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The evaluations of the Janani Suraksha Yojana (JSY) in India, the largest conditional cash transfer programme in the world in terms of number of beneficiaries, suggest that there has been a huge increase in institutional deliveries with the introduction of the programme. For example, the percentage of women reporting institutional delivery increased from 39% in 2005-06 to 73% in 2009. At the same time, wide differentials in institutional delivery and skilled attendance at delivery continue to be observed by age, rural-urban residence, education, caste, religion and wealth status; for example, 54% of uneducated women compared to 93% of those with 12 or more years of education reported an institutional delivery in 2009. The extent to which the JSY had contributed to narrow these differentials is less documented. This paper examines the extent to which the differentials in delivery care have narrowed following the introduction of the JSY.

A cross-sectional study was conducted among 4770 women aged below 35 years who had delivered within an year preceding the interview in Alwar and Jodhpur districts of Rajasthan, India, during September 2009-February 2010. Birth history data, including on place of delivery was obtained for all births that took place in the six years preceding the interview. For the analysis presented in this paper, births that had taken place before November 2006 when the JSY became a generalised scheme with all the restrictive criteria removed in low-performing states, including Rajasthan, was considered as pre-JSY births and the ones that occurred thereafter as post-JSY births. We compared the differentials in institutional delivery by a set of indicators of socio-economic vulnerability. Included within indicators of socio-economic vulnerability are mother's education, religion, caste and household economic status.

Findings show that 62% of women who participated in the study had delivered their most recent child in a health facility. There is an impressive increase in institutional deliveries since the introduction of the JSY programme; institutional deliveries increased by 11% points during 2004-2006 and it increased by 29% points during 2006-2009.

Findings present a mixed picture with respect to the extent to which differentials in delivery care have changed with the introduction of the JSY. Differentials in institutional delivery by education, economic status and rural-urban residence have narrowed considerably. For example, 44% of uneducated women compared to 94% of those with 12 or more years of education reported an institutional delivery for post-JSY births, that is, a 50 point difference. For pre-JSY births, corresponding percentages were 19 and 91, that is, a 72 point difference. However, the reduction in differentials by caste and religion was not quite as positive. The study calls for special attention to motivate the socially excluded groups to access maternal health services.

74-4

Obstetric Complications and Delays in Seeking Emergency Care in Poor Settings of Northern India: A Case Study of Bahraich District in Uttar Pradesh

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Uttar Pradesh is one of the most populous and less developed states of India, where all development and health parameters have remained low. Literatures reveal that all pregnant women are at risk of obstetric complications and most life-threatening complications occur during delivery. Huge gap exists between demand and supply of seeking the health care which leads to remain high maternal mortality in poor settings. Delays in decision to seek care, arranging transport, start of treatment have also significant contribution in high maternal mortality.

This study presents an overview of key findings from two rounds of nationwide District Level Household Survey (DLHS), 2004, 2008 and quantitative survey in 2011 of households (demand side) and health facilities infrastructure (supply side) of Bahraich district. This paper investigates obstetric complications and delays in seeking care among currently married women aged 15-34. The survey collected data on the prevalence of obstetric complications, treatment-seeking behavior and reasons for delay in seeking medical care. The present study also explores ten verbal autopsy of maternal death in the district. A total of 964 currently married women aged between 15-34 and who had given birth in last two years preceding the survey date. All government health facilities above the sub-centre level were covered in facility assessment.

More than 60 percent of women, who delivered child in two years preceding the survey, reported at least one complication during pregnancy or postpartum period. Close to two-thirds of this group sought treatment for their most severe symptom. Only one-third sought treatment from a qualified provider. More than two-thirds of women either failed to seek any treatment or sought treatment from an unqualified provider. Major delay in seeking care was the decision delay (2-3 days) followed by arranging the transportation (average hours 3) and start treatment within an hour after reaching health facility. The principal reason cited for failing to seek care for life-threatening complications was concern over ‘medical costs', ‘facility too far' and ‘did not feel it is necessary' were found for maternal care-seeking behavior in these settings. More than one-third of cases were decided by husband or in-laws whether to seek care or not in the community. Findings of facility survey reveal poor supply and management of primary health care in district. Health services and trained human resources are mainly concentrated at the block headquarters.

Despite these gaps in access to skilled delivery and effective emergency obstetric care, some progress has been made in reducing maternal mortality levels since the introduction of National Rural Health Mission, 2005. Improved obstetric care and declining levels of fertility and unwanted pregnancy may have played critical roles in addressing the maternal health care needs of low resource settings women in northern India.

74-5

Knowledge and Access to Maternal Health Services Through Voucher Schemes: Experiences from Uttar Pradesh, India

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In India, several competitive voucher schemes have been implemented to provide family planning and maternal and child health (MCH) services for the poor. Voucher is "a subsidy that grants limited purchasing power to an individual to choose among a assigned set of goods and services". Maternal Health Voucher Scheme is a tool that addresses maternal and neonatal mortality by reducing inequities in reproductive health care through access to quality services and empowering vulnerable populations of Agra and Kanpur Nagar Districts of Uttar Pradesh State. The percentages of pregnant women who received full ANC in baseline were 6.2 per cent but in end line it increased to 16.5 per cent. The findings also informs about increase in institutional deliveries through private sector by 29 per cent while the public sector experienced an almost 300 per cent increase. The client satisfaction survey based on convenience, personal manner of health professional and staff, technical skills and quality of health professionals, explanations of what was being done, cleanliness and length of time spent waiting revealed a score above 2.5 on a scale of 1 - 5 where 2.5 or above was considered acceptable. Based on these results the Government of Uttar Pradesh decided to continue and scale it up in five cities of the state.

75-1

Spousal Violence against Women: Consequences of Reproductive and Sexual Heath Status in India

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Main objective of this study is to understand the extent of spousal violence in India and their association with women reproductive and sexual health status. Data for this study obtained from NFHS-3(2005-06). NFHS-3 collected information regarding women socio economic status, experience of spousal violence and reproductive and sexual heath status among women. Spousal has been conceptualized under three forms of violence. These are: physical violence, emotional violence and sexual violence. Bi-variates and multivariate analysis were carried out in this study. Result shows that almost 35 percent currently married women in India experienced any physical violence whereas 16 percent and 10 percent women experienced any emotional and sexual violence respectively. Majority of the women agreed that wife beating by their spouse is justifiable if she neglects children or argues with him. Logistic regression analysis have been carried out to examine effect of women's socio-economic and demographic characteristics as well as women's reproductive and sexual heath variables on spousal violence. Result shows that Muslim women are more likely to experience any physical and sexual violence than Hindu women (OR=2.338; $p<0.001$ for physical violence and OR=1.925; $p<0.05$ for sexual violence). Partners drinking habit increases the chances of all types of spousal violence (OR=3.057;$p<0.001$ for physical violence, OR=2.674;$p<0.001$ for emotional violence and OR=2.205;$p<0.001$ for sexual violence). Women income in comparison with husband is most important on spousal violence. Women are less likely to experience any physical and emotional violence if she has balance or less income level than her husband. Women who are using any modern contraception are more likely to experience any emotional and physical violence. Prevalence and STD increases the chances of spousal violence significantly (OR=2.303;$p<0.001$ for physical violence, OR=2.522;$p<0.05$ for emotional violence and OR=1.97;$p<0.001$ for sexual violence). Women ever had any terminated pregnancy shows a positive association with the spousal violence.

75-2

Missed Opportunity: Integration of Violence Against Women with Reproductive Health Service Delivery

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Globally, at least one in three women has experienced some form of gender based abuse during her life time and it starts before birth and continue till old age because of their limited social and economic power compared with men. In 1991, it is found that 12.3% of maternal deaths in our country were due to violence. According to BDHS 2007, 53% 0f women have experienced some form of physical and/or sexual violence, while 13 percent have experienced both types of violence.

The objective of the review article is to find out the opportunity to provide counseling and other services through existing health care system to the women are being suffered by gender based violence. This article is based on different study: Bangladesh Demographic and Health Survey (BDHS); Job description and curriculum of service providers.

Women's reproductive and sexual Health clearly is affected by gender based violence. It is found that women who experienced intimate partner abuse were three times more likely to have a gynecological problem than were non abuse women. These include STD and HIV transmission, miscarriages, risky health behaviors and more. Most of the cases they are far behind to exposure of health care and these violence acts as a silence killer of the society. Like other developing countries, in Bangladesh most of the women only get chance to visit health centers for reproductive or child health services. In the current state, the Bangladesh Healthcare system is not systematically prepared to address violence against women though there is a good infrastructure of health care system up to grass root level even at home. Reproductive health services including family planning, menstruation regulation (MR), adolescent health, maternal health are being provided through union level sub centers with trained providers. Counseling is an inbuilt activity of all the services. It is an opportunity for the health care providers to address violence against women and to provide support to them through sexual and reproductive health (SRH) counseling.

There is no mandate or policy on violence in the health service system. Moreover, our existing health system does not recognize violence as a health issue. The health care sector can capitalize on this opportunity by ensuring supportive and safe environment for the violence against women. Strategic approach to train providers in SRH counseling would be helpful to breaking the silence.

Key words: violence against women, reproductive health, sexual health, counseling, health providers

75-3

Intimate Partner Relationship and Consequent STI/HIV Vulnerability among Girls Working in Beer Bars of Mumbai, India

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Almost 80% of the girls working in the service bars of Mumbai are living in intimate relationship (boyfriend/husbands). The emotional bondage in the relationship hinders in adopting consistent condom use behaviour. This leads to a critical public health concern of a breaking the transmission mechanism of STI/HIV infection between the girls working in bars and innocent spouse of the men's who are in intimate relationship.

Under this backdrop the main objective of the paper is to explore the key factors related with the low level of consistent condom use with the intimate partner.

The data for the present study is collected using a combination of quantitative and qualitative methods. A total 379 sample using systematic sampling design and 15 in depth interview were conducted. The level of intimacy scale is computed using PCA method and adjusted effect is measured using multivariate logistic regression.

It is observed that almost half of the girls don't use condoms consistently and 36 per cent never used condoms with their intimate partners. Three important dimensions that are emerged from the quantitative scale capturing the level of intimacy are of the level of worthlessness, level of comfort and level of security. The combinations of affirmative and negative factors coexist in a relation with the intimate partner. The adjusted model suggest that the girls that are more likely to never use condoms with their partner are those who perceive their partner as highly worthless (OR: 2.07, $p<0.05$), and high level of mistrust (OR: 2.4, $p<0.05$). Girls who highly mistrust their partner are 2.4 times more likely use condoms inconsistently. It is also found that working conditions of the girls are making them more economical vulnerable in terms of lower income, greater reliance on sex work and high burden of loans increasing their dependency on their live-in relations. The current situation is manifested with the high level of STI prevalence among those who are in intimate relation (80%) than those who are living alone (77%).

This study highlights that even after having lack of confidence in the intimate partner relationship girls working in beer bars of Mumbai are into such relationship because of the high social value of living with a man and expectation of support from intimate relations. Such relations are making them more vulnerable and reducing efficacy of the girls in negotiating protective behaviour. The intervention should focus on targeting the intimate partners of the girls working in beer bars and improve the working condition through regulatory mechanism such as fixed wage or salary, fixed working hour and protection from violence.

75-4

Violence in Dating Relationship: Extent, Nature and Consequences

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Dating violence among adolescent and youth is not only an important personal and social issues but also important from the public health point of view. Dating violence is an unexplored issue in Nepal. This paper aims to explore the extent, nature, and consequences related to dating violence, and to examine potential underlying factors that contribute to and perpetuate dating violence among college students in Nepal.

The data used in this paper is from a cross-sectional survey on *"Exploring the nature and extent of dating violence among college students in Nepal"* carried out in 2010. A multi-staged random sampling technique was employed for selection of the college male and female students. Univeriate, bivariate and multivariate logistic regression was used for analysis of the self-administered questionnaire that was completed by 1,276 college students (636 males and 640 females).

Slightly less than half (46%) of 1,276 students (n=588) had experienced dating. Among these students who have experienced of dating, nearly half (47%) reported being a victim in dating relationship, with females reporting a significantly higher (55%) incidence of victimization than males (43%). Dating violence ranged in severity from unwanted physical touching (28% female and 4% male experienced) to rape (5% female experienced). Multivariate analysis revealed that sex of the students, education level, migration status, relationship with parents, and living arrangements had significant predictors for dating violence. Consequences of dating violence varied largely with sex of students. Depression, lack of sexual desire, pain during intercourse, and thoughts of suicide were reported as consequences of dating violence. High levels of dating violence and related negative consequences indicate a need for comprehensive programs to address the issue.

76-1

Capitalist Patriarchal Relations and the Implementation of Integrated Essential Reproductive Health Services Policy: A Case Study of the Primary Health Care in Tasikmalaya District, Indonesia

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Integrated Essential Reproductive Health (IERH) Services are the health services at the Primary Health Care (PHC) which consist of essential reproductive health elements, namely Maternal and Child Health, Family Planning, Adolescent Reproductive Health and Reproductive Tract Infection including Sexual Transmitted Infections and HIV/AIDS and implemented through integrating services based on client reproductive health and reproductive rights needs. The objective of this research was to investigate capitalist-patriarchal systems that are related to either introducing and implementing, or obstructing the services. A qualitative approach with a Socialist Feminist Perspective was used, and a series of open-ended interviews were conducted. The informants, especially the policy makers, health care providers, and religious leaders at the PHC units that have not implemented the IERH program were selected purposively and documents available from health-related institutions were also reviewed.

This study found that the IERH Services could not be fully implemented at the PHC because of the law on regional autonomy, which gives authority to local governments to make decisions on implementation of programs initiated by the central government. Religious leaders and health care providers, including doctors, also resisted implementation of these services. On the other hand, the successful IERH Services at PHC units were mainly due to cooperation and support from religious leaders and health care providers.

IERH Services were not allowed because of the patriarchal and capitalist ideology of the health workers and religious leaders. They have applied radical patriarchal interpretation of the Islamic teaching and values against the IERH Services, such as sterilization and abortion. Religious leaders and health care providers have assumed that sterilization of either men or women stops the natural process of fertilization, and prevents the reproductive organs from performing their natural function. They have also assumed that family planning is a program intended to control the number of children, contraceptive methods are population control measures from the central level, distribution of condoms increases promiscuity, and sex education for adolescents encourages premarital sex. Abortion is considered to be a crime, and it is prohibited in Islam. Privatization of the health sector has resulted in commercialization of health services, and as a result has decreased the accessibility and affordability of the services for women. For instance, doctors and midwives who operate private clinics are concerned that if IERH Services are implemented, they will lose income. Most policy makers are men, and their policies are gender biased, which tends to ignore women's rights. The health policies do not differentiate between the health care needs of men and women. These strong patriarchal and capitalist ideologies have restricted women from making decisions and accessing their reproductive health rights.

Key Words: Patriarchy, Capitalism, Integrated Essential Reproductive Health Services, Primary health care, Tasikmalaya District

76-2

Young Men vs Traditional Culture: Sexual Behaviour and Attidude an Empirical Study on Primitive Tribal Groups of India

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The increasing burden of sexually transmitted diseases (STD) and the vulnerability of youth and tribal population to it have formed the basis for the present study. This is a part of a larger study carried out for academic purpose among 414 male tribal youth of two Primitive Tribal Groups in the state of Orissa, India namely, the Juang and the Lodha. Being rich in cultural tradition, the tribal groups have their own code of conduct on sexual behaviour and related aspects.

Early age at marriage and early age at sexual debut are two of the serious concerns among the youth of primitive tribal groups. The sexual behaviour of tribal youth highlighted the fact of existence of pre-marital and extra-marital relationship with multiple partners. The youth have been exposed to non-traditional world which has changed their viewpoint and making them lesser accountable towards their traditional life-ways. On the other hand, lack of definite social system or diminished social system for imparting sexual knowledge to the youth has been reflected in having no knowledge or incorrect knowledge about sex and related aspects among the tribal youth. Having sex with strangers or co-workers, while being outside the village, especially as migrant labourer, is evident among some tribal youth. This has, as seen from the study, direct bearing on the sexual behaviour and sexual health of the youth at large.

The study further highlight that it is not the presence or absence of youth dormitory or any institutionalised norms responsible for determining the sexual behaviour. It is the existence of social system like village exogamy, patterns of marriage like levirate and people's life style and extent of social control mechanism that influence the sexual behaviour and activities of youth of these two primitive tribal groups.

76-3

Pre-Marital Sex in the Changing Life Style of Female College Students of Maharashtra, India

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Pre-marital sex is not socially acceptable for the females in India. . There are hardly any research done in the country to explore pre-marital sexual behaviour, the ways in which the sexual partnership are formed among the youths, and the social meanings that the youths attribute to the relationship.Pre-marital sex is often leaded to unsafe risky sexual behaviour leading to HIV infection/STI. The present paper made an attempt to study the perception and practices of pre-marital sex among the female college students from the elite families of Maharashtra.

As a part of research for doctoral degree, the author interviewed 391 female college students from seven HIV high prevalent districts of Maharashtra State. The students were selected by conventional two stage cluster sampling approach from the degree colleges. Although the data was collected district wise, for the present paper, Maharashtra State (total sample) has been used.

Though more than four-fifth (86%) of the female college students believed that pre-marital sex is unacceptable in their society, more than half (55%) felt that sex is a natural phenomenon and one should not feel guilty about it. About 23% of the students reported that they would not feel any repentance or guilt if they experience pre-marital sex and one-fifth of them stated that if given opportunity they would like to explore sexual pleasure. What is remarkable is that, 86% of the students also stated that most people do not share the truth about their sexual experiences.About 12% of these unmarried female students ever had sexual relationships with their male partners (class mates, boyfriends and lover) out of romantic relationship, trust and adventure. About 83% of them used condom at last sex, while consistent condom use during last 12 months was 76%. The purpose of using condom with these sexual partners was limited only to avoid unwanted pregnancy. Use of condom to prevent infections like STIs and HIV were not thought about. Remarkably, the odds of participating in coital sex were found to be decreased at a highly significant level ($p<0.001$) with an increase in the level of restrictions imposed by their parents on their daily activities ($p<0.01$).

There is a need for a wider societal acknowledgement of the social reality of a substantial and probably increasing level of pre-marital sexual interactions among the female students. Efforts should be taken to address widespread gender disparities in sexuality and pre-marital sex among the female students. For this purpose, parents have to be involved in a majorway, since they are the primary agents for socialization for young persons from an early age, in addition to the close relatives, neighbours and teachers.

76-4

Correlates of Promiscuous Behaviour among Young Men Living in Low Income Communities of Mumbai, India

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The objectives of the study are-

1.To examine levels and differentials of non-spousal partners among young men.
2. To examine correlates for promiscuous behaviour among young men.

The basic data used in this paper has been collected as part of ASHRA (Alcohol Use, Sexual Health Risks and HIV Prevention among Young Men in Low Income Communities) study using a combination of quantitative and qualitative research methods. The survey was conducted among 1239 men aged 18 to 29 years in low income slum communities in Mumbai during 2007-08 adopting a randomized cluster approach. The survey collected information on men's activities, friend circle, health, alcohol use and risky sexual behaviour. The term sexual promiscuity has been considered as synonymous with multiple partners and it has been defined as two or more sexual partners in the study. Bi-variate and multivariate techniques have been used for the analysis.

The finding reveals that a significant proportion of young men in the low income communities in Mumbai, who were below age 21, unmarried, living in Mumbai since birth, engaged in high level of drinking, with high exposure to sexual stimuli and experienced sex below age 18, were found to engage with non spousal sexual relations. Marital status, duration of stay, drinking pattern, exposure to sexual stimuli and age at sexual experience were found to have significant effect for promiscuous behaviour among young men.

For the effective intervention regarding curbing the spread of RTI/STI including HIV infection, programmers must give due consideration to young men those who are unmarried, engaged in heavy drinking and have been living in such communities since birth.

77-1

Determinants of Skilled Birth Attendance in Cambodia: Evidence from the Recent Increase in Service Up-Take

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This paper examines recent trends in facility based delivery care and skilled birth attendance (SBA) and explores their determinants in Cambodia. Recent figures show substantial increases in SBA and facility based deliveries in Cambodia over the last decade. We examine the socio-economic and demographic determinants of this rise, including whether various burgeoning health care financing mechanisms such as health equity funds or voucher schemes targeted towards the poor are significantly associated with this change.

A strong link has been established between maternal mortality and use of facility-based delivery care; it is suggested access to maternal health services could avoid 74% of maternal death (UNFPA, 2009). Frameworks such as that by Andersen (1995) propose several determinants of health service use, and research to date has found many such factors also determine use of maternal health services. These include age, education, wealth, parity, occupation, distance to services, cost, knowledge about services, perceived service availability and quality, women's status and autonomy (Nahar and Costello, 1998; Chakraborty et al, 2003; Ensor and Cooper, 2004; Yanagisawa et al, 2006, Gabrysch et al 2011, Feng et al 2011). Like elsewhere, such determinants are associated with better access to maternal services in Cambodia. In the last decade healthcare financing schemes targeting underserved populations in Cambodia have been seminal to strategies attempting to improved access to critical health services. This study examines the extent to which an observed increase in SBA is associated with new financing strategies, some of which target reproductive health (RH) services.

This paper uses data from a RH voucher and accreditation evaluation being conducted by Population Council in three provinces: Kampong Thom, Kampot, and Prey Veng. Data are drawn from a baseline household survey of 2201 women of reproductive age in nine Operational Districts (ODs) with the RH voucher service and nine matched control ODs without vouchers. The study sample is drawn from all live births to these women from 2006 to 2011 (N=2425). Preliminary analyses suggest the trends in our sample mirror those nationally, with SBA at delivery increasing from 64.5% of all births in 2006 to 85.4% in 2011. Multivariate analyses examining the determinants of SBA will be conducted using logistic regression on the baseline sample, particularly testing for an association between available healthcare financing mechanisms and SBA.

Knowledge of the impact of existing healthcare financing schemes not specifically targeted towards RH on SBA will provide insights for a subsequent study estimating the impact of the KfW funded voucher programme on RH service uptake in the same three provinces in Cambodia. The latter quasi-experimental analysis will occur in a prospective study utilizing endline data, collected once the voucher program has been implemented for 12-18 months, in late 2012.

77-2

Causal Impact of Being an Unwanted Child on Survival in Matlab, Bangladesh

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Unwanted children may have lower survival. Testing for correlation between wantedness and child outcomes requires ex ante statements of fertility intentions to prevent post-hoc revision of birth intentions. It also requires control for unobservable confounding between successful fertility regulation and successful investments in children that are born.

We test the effect of infant wantedness on survival and schooling using data from Matlab, Bangladesh. Using a bivariate probit model to instrument wantedness using residence in an area receiving intensive family planning services, we find that unwantedness increases child mortality (OR 1.32 $p<0.05$). The effect size is 0.02 points of mortality change against a background mortality risk of 0.08.

Because of the relatively fixed level of wealth and social capital and incomplete access to abortion, unwanted babies who are born enter into a resource-constrained environment and, as a result, suffer higher mortality.

77-3

Review of Experience of Implementing Maternal Death Audit in Nepal

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The process of reviewing maternal deaths was initiated in Nepal in early 1990s. Even though all hospitals do not review the deaths routinely, 16 hospitals are formally identified as Maternal Death Review proces implementing hospitals. National Maternal and Perinatal Death Review Committee has been formed to provide technical guidance to implement the review system. Standard forms have been developed and national level review meetings and onsite coaching have been organized to institutionalize the system. After the implemetation of the review system in 16 hospitals, it was essential to document the entire process in implemetation and to see the effectiveness of the approach and the challenges faced during its implementation.

Objective

- To document and anzlyze Nepal's experience in implementation of the Maternal Death Review process
- To provide a detailed analysis of the implementation of the maternal death review initiatives
- To analyze follow up actions at the national and local level undertaken as a result of the the review and the impact of the review system to reduce maternal death
- To draw recommendations and actions for strengthening and institutionalization of the maternal death review

A desk review was conducted to obtain relevat information at the national and international level including the status of the implemetation of methods reviewing maternal deaths, findings of the reviews and its disssemination. Management and administrative arragements for the reviews, strengths of and constraints to institutionalize the review process were also analyzed. A cross-sectional study was also conducted to obtain relevant information through key informant interview at the central, regional, Zonal, and district leel hospitals and medical colleges.

Though there seemed to ba a lot of problems to institutionalize the hospital maternal death review approach to curret implementing hospitals it is impressive to note that most of the implementing hospitals are willing to use the approach as a tool to improve the quality of maternal health care. Government of Nepal has also given prioriity to improve the maternal care at the health facility through supply and demand side financing. Therefore, hospital materal death review approach can play animportant role to evaluate the effectiveness of supply side program intervention, to improvennt the quality of maternal health care and to attain Millennium Development Goal 5 by reducing maternal death at the facility.

There are many challenges to make the review process sustainable. Major challenges include the shortage of health personnel and high patient load, lack of concrete plan to build the capacity of health personnel, lack of Intensive Care Unit in the referral hospitals, traditional nature and paper based health information management system. Based on the findings few recommendtions were made to immediately implement new initiatives so as to institutionalize the maternal death review system in Nepal.

77-4

Use and Misuses of Ultrasonography in India: An Enquiry to Improved Pregnancy Care and Adverse Sex Ratio in India

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The use of ultrasonography (USG) has acted as a double-edged sword in India's development. While it has improved maternal health situations by saving life of millions of women, it has played an important role in eliminating millions of girl children before birth. Research addressing this context has always been restricted to find out the causal relationship between use of ultrasound and prevalence of sex determination and failed to highlight the benefits of the use of USG.

Using the calendar data of the NFHS-3 (2005-06) collected for each pregnancy this paper critically examined the use of USG at different demographic contexts. A series of bivariate and multivariate analyses were carried out to ascertain the attributes of use of ultrasound in India after controlling possible confounders.

Results: 1) Results indicate that the practice of USG is substantially higher among socially and economically better off women seeking antenatal care, possibly to follow the development of the fetus. 2) Among women who had undergone USG, four-fifths of them had given live birth and one-fifth had either had a pregnancy loss or both live births and pregnancy loss. 3) The correlation coefficient of ANC and use of USG is 0.85 indicating that women seeking antenatal care are more likely to undergo USG test to monitor the pregnancy and of the fetus. 4) Among mothers in parity one and one birth in the reference period with no pregnancy loss, 45% of them had undergone USG test. 5) Controlling for socio-economic confounders, women who had experienced pregnancy complications such as vaginal bleeding or swelling of hand, leg and body were more likely to go for a USG test compared to those who did not have any pregnancy complications. 6) About 5.4% women with USG test were estimated to have induced abortion, still births and miscarriages. Thus a segment of these were more likely to have gone for sex selective abortion in the reference period.

Based on the analyses, we conclude that USG has a diverse role during pregnancy that ranges from tracking the development of the fetus to identification of the sex of the fetus. By enabling detection of pregnancy-related complications, USG has played an important role in improving maternal health outcomes across the country, and it will be wrong to solely associate the increasing availability of USG to the increase in sex selective abortions. Extended research is needed to further elaborate on this association which will contribute in determining the need of and devising specific USG-related measures in curbing the practice of sex selection in India.

77-5

Awareness about RCH Programs among Ever Married Women in Most Populous State (Uttar Pradesh) of India: A Regional Analysis

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The paper analyzes the factors affecting people's awareness to various reproductive and child health programs, like Antenatal care, Institutional delivery, breast feeding, immunization, and family planning in different regions of Uttar Pradesh using data from DLHS-3.The analysis is based on information collected from ever married women (EMW) aged 15-49, who are aware about above running government health programs. The findings reveal that in the awareness about immunization and family planning is almost universal in all regions where as in case of ANC, the level goes up to 85 percent and for institutional delivery and breastfeeding awareness have been reported to be more than 70 percent. Friends and relatives are main source of information about spreading awareness about ANC, institutional delivery and family planning whereas role of health professionals and electronic media comes at second and third position. But in case of immunization health professionals are most important source of media who spreading awareness followed by print media. Electronic media is the main source of information about the breastfeeding followed by friends and relatives. Awareness by different Background characteristics depicts that ever married women of age group 25-29 were more aware about different government health programs followed by 20- 24 age group of EMW. Women having higher education, living in urban areas, belonging to upper wealth quintile are more aware than those who are less educated, living in rural areas and belonging to lower wealth quintile. Among caste groups, others are at advantage as compared to SCs, STs and OBCs. Eastern UP among all regions seems to lag behind in case of breastfeeding, immunization and family planning awareness. Despite being economically better-off, the western region lags behind in case of awareness about institutional delivery.

78-1

Disparity in the Reproductive Timing among Females in Orissa

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In situations of highly regulated childbearing, the process of family formation has been of keen interest to family demographers. Differential patterns of transitions between births signify varying impacts of social change and its forces and have led to greater emphasis being placed on the dynamics as opposed to structure of family building. In this study, an attempt has been made to elaborate observed patterns of reproductive timing by focusing on a population of Orissa where marriage and parenting are the socially defined behaviours of the females. Orissa is one of the 28 states of India and it is situated on the eastern coast of Indian peninsula. The population of Orissa is primarily non-contracepting, early and contractually marrying, and predominantly rural uneducated. The life table technique is applied to examine the progression between events of interest. A confounding factor not adequately addressed in studies of differential timing is that of age at entry into marital union since social structural effects may selectively be expressed in the nuptial cohorts. It is necessary to control for the timing of entry into sexual union. This study examines the differential timing of reproductive events within three marriage consummation cohorts of women aged 25 years or younger. It also estimates the independent effects of the socioeconomic factors on the probability of progressing to successive births, using the conditional logistic technique developed by Guilkey and Rindfuss (1985) which emulates multivariate life table analysis. It is observed that between ages at consummation groups, the pattern and speed of family formation are similar, though lagged. The scheduled castes and tribes show a slightly altered pattern. Controlling for age at consummation, differences are observed for caste as well as place of residence and literacy. These differences seem largely attributable to lactation, with longer duration among the rural and illiterate females. The factor, which controls exposure to intercourse, is the differential cultural practices regarding visitation of the young females to the parental home after consummation of marriage.

78-2

Romantic Relationship and Its Association with Mental Health of Indian Youth

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A lot of stigma is attached to premarital romantic relationships and they are widely discouraged in Indian setting whether or not they involve sex, still many youth form such partnerships. Contemporary research especially from developed countries suggests that progression in romantic relationship has a strong bearing on the mental well being of youth. However, few studies have examined these relationships in developing countries. In this context, the present study assesses the prevalence of pre-marital romantic relationship and the progression rate from holding hands to hugging, kissing and intercourse. Study also, tries to examine the association of the romantic relationship and progression in romantic relationship with mental health of youth.

Data comes from "Youth in India: Situation and Needs" survey conducted in 2006-07 (N= 31,259 female and 14,281 male aged 15-24 years). It is the first ever sub-nationally representative study, undertaken in India, to identify key transitions faced by young married and unmarried women and men. Mental health was assessed using General Health Questionnaire-12 (GHQ-12) scale. Along with descriptive analysis and life table approach, unadjusted and adjusted Logistic models have been used to analyze the associations between romantic relationship and poor mental health. These associations were tested separately for women and men. Appropriate sample weights have been applied for estimates to adjust for design effects.

The analysis reveals that the prevalence of premarital romantic relationship is more than twice among men compared to women. Both female and male youth involved in premarital romantic relationship experience a higher prevalence of poor mental health. Yet females experience a larger increase in depression than males in response to romantic involvement. Female's greater vulnerability to depression appears to explain a large part of the differential cultural context for males and females. Mental health status by physical intimacy with romantic partner shows that male youth experiences a negative mental health if they are not going beyond non-coital relationship that is holding hands, hugging and kissing. Conversely, female youth who go beyond non coital relationship and indulge in sexual intercourse are more likely to have poor mental health. The results indicate a clear gender differential, among men the progression towards physical intimacy reduces the chances of negative mental health whereas same increases the chances for poor mental health among women. The results provide evidence for the fact that romantic relationship particularly involving sex is not acceptable in India and leads to mental health hazards, especially for women. The thinking that pre-marital relationship is virtually not existent in Indian society needs a critical re-examination. Policies and programmes should be focussed on imparting sex education during adolescence and should ensure that pre-marital romantic relationship if occur should be safe and wanted.

78-3

Risk Andprotective Factors for Sexual Intercourse among Adolescents in Viet Nam

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This research identify risks and protective factors relating sexual intercourse among adolescents. The data is collected in 2006, 2007, anh 2009 in a longitudinal research project on adolescent health conducted in Chi Linh district, Hai Duong province – a research and training field site of Hanoi School of Public Health of Viet Nam.

The results show that adjusted percentage of adolescents having sexual intercourse experiences is 1,7% boys and 0,4% girls (survey 2006), 4,9% boys and 1,9% girls (survey 2009). The incidence of having sexual intercourse is 44/1000 boys per 3 year and 19/1000 girls per 3 year (2006 to 2009). Average age at the first sexual intercourse is 16,2 years old for boys and 17,2 years old for girls (2006). The risk factors relating sexual intercourse among boys are age group 15-19 years old; urban residents; low secure community; family domestic violence; having deviant friends (smoking, drinking); frequent use internet and play game. The protective factor relating sexual intercourse among boys is having mother taking care when 10 – 14 years old. The risk factors relating sexual intercourse among girls are physical and mental abuse in family (being bitten and scold in family); having deviant friends (smoking, drinking); frequent use internet and play game. The protective factor reducing sexual intercourse among girls is teacher's encouragement and fair treatment in school.

This study raises awareness about the risk factors and protective factors for sexual relations in adolescents. The recommendation is that the communications program, education, counseling, community intervention should enhance protective factors and reduce the impact of risk factors for sexual intercourse and unsafe sex in adolescent in Viet Nam.

78-4

Inequitable Access to Reproductive Healthcare: Status and Determinants of Adolescent Pregnancies in India

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An estimated 14 million young women aged 15-19 years gave birth each year between 1995 and 2000, with 12.8 million births occurring to adolescents in the developing countries. According to WHO report on adolescent pregnancy, 2007, adolescent girls face considerable health risks during pregnancy and childbirth, accounting for 15% of the Global Burden of Disease for maternal conditions and 13% of all maternal deaths. Adolescents aged 15-19 years are twice as likely to die in childbirth as women in their twenties.

Adolescent pregnancies as well as their poor health outcomes, has been an important concern for India in achieving MDG-5. These poor outcomes are attributed to inaccessible family planning services to adolescents and non-utilization of available reproductive healthcare services due to socio-economic and cultural factors. Hence, it is important to understand the level and determinants of reproductive healthcare utilization in adolescent girls in India.

To examine adolescent girl's access to reproductive health care services in comparison to women above 20 years of age and to identify the determinants of utilization of reproductive healthcare services by adolescent girls in Empowered Action Group (EAG) and Non-EAG states in India.

This paper is based on National Family Health Survey (NFHS-3) conducted during 2005-06.The data has been used to compare the health seeking behavior and healthcare utilization of adolescents as compared with women over 20 years of age. NFHS-3 provides information on 109,041 households comprising of 124,385 women aged 15-49 and 47,590 were age 15-24, representing entire India. Bivariate and multivariate analysis has been used to meet the objectives of the paper.

The major findings show that there is huge socio-economic difference in health seeking behavior and reproductive services utilization by adolescents in India. Only 37.9 % of births to mothers aged 15-19 yrs were delivered in health facility. Only 17.3 % and 28.7 % mothers had institutional delivery in lowest and second income quintile respectively as compared to 78.9 % in highest quintile. Exposure to media and awareness about reproductive health services has emerged as an important determinant of healthcare utilization. Though access to reproductive healthcare is inequitous in India, inequity in its distribution is very evident if we disaggregate data in EAG and non-EAG states with EAG lagging far behind non-EAG in outcomes. In addition, role of social gradient in determining access and outcomes of reproductive health care is very evident in the analysis.

78-5

Assessing the Lives of HIV-Infected Adolescents in Thailand: A Coupled Life-Event History Approach to Adolescents and Their Caregivers

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Children born with HIV infection who receive antiretroviral therapy have an increasingly high survival rate and are now entering adolescence. However, reports suggest higher rates of treatment failure and mortality in this age group. The "Teenagers Living with Antiretrovirals" (TEEWA) study has designed an original survey to assess the situation and needs of these children receiving lifelong therapy.

HIV-infected adolescents, living in families or in orphanages, are recruited in hospitals across Thailand. Self-administered questionnaires completed by the adolescents are linked with face-to-face interviews (life-event history approach) of their caregivers.

The adolescent questionnaires explore household composition, school/employment, perceived health, reproductive health, relationships with adults/peers, leisure activities and plans for the future. The caregiver questionnaires assess the adolescents' family history, medical/HIV history, disclosure of HIV status, discrimination and household economic situation.

By September 1st 2011, 613 adolescents have been surveyed: 462 HIV-infected adolescents living in families and their caregivers from 19 hospital sites; 111 HIV-infected adolescents living in 5 orphanages; and 40 uninfected adolescents living in the same orphanages.

For the teenagers living in families (median age 14 years), the situation shows that the majority of their caregivers are women (78%), 30% are parents and 40% grand-parents. Nearly half of the adolescents have been in the care of more than 2 successive caregivers and the majority (46%) have lost both parents suggesting complicated and potentially disruptive childhood histories.

Most adolescents (89%) still attend school and the majority (65%) has undergone puberty. They were not diagnosed at birth or immediately thereafter: their median age at HIV diagnosis was 5 years and only later (at a median age of 8 years old) were they given antiretroviral treatment, probably a reflexion on the lack of antiretroviral availability as they became widely available only after 2003. Very few adolescents (3%) reported being sexually active.

Although their care-givers declare that most adolescents (88%) know their HIV status, a significant proportion of them were not formally disclosed but "learn their HIV status by themselves". As the process of disclosure to a child is often long and progressive with incremental levels of understanding, many caregivers seem ‘unsure' of their child's comprehension of their HIV status or what it meant. Finally, the children seem frequently confronted with nasty or even violent stigmatization experiences, often instigated by classmates at school.

The survey design, its implementation and first descriptive results on their family and living circumstances will be presented.

79-1

Treatment-Seeking for Symptoms of Reproductive Tract Infections among Married and Unmarried Young Women in India

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Indian women report low levels of treatment-seeking for symptoms suggestive of reproductive tract infections (RTIs). Studies on treatment-seeking have focused on women of reproductive ages in general; little is known about the experiences of adolescent girls and young women.

Data from 2,742 married and 2,108 unmarried young women aged 15-24 years reporting at least one symptom of RTIs in the past three months are drawn from a sub-nationally representative cross-sectional study of youth in India. Multivariable logistic regression analyses were conducted to ascertain the correlates of seeking treatment from formal providers, i.e., health care providers in public or private health facilities. Additionally, among those who had sought treatment from formal providers, correlates of seeking treatment from private providers compared to public sector providers were identified.

Just two-fifths and one-third of married and unmarried young women, respectively, sought treatment from formal providers for RTI symptoms. While the experience of marital violence was inversely correlated with seeking treatment from formal providers among married women perceived access to sexual and reproductive health services and awareness of symptoms of STIs were positively associated. Both married and unmarried women were more likely to access treatment from private than public sector providers; young women's agency was positively associated with seeking treatment from private providers.

Treatment-seeking for symptoms of RTIs remains limited among young women in India. Findings underscore the need for addressing power imbalances within marriage as well as sensitising health care providers about developing appropriate strategies to reach young women.

79-2

Sexually Transmitted Infections : Basic Issues

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Sexually Transmitted Infections (STI) are passed between people through sexual contact. Agents of infection include bacteria, viruses and other micro- organisms that can enter a person's urethra , vagina mouth or anus. Some cause no symptoms at all, and some are easily treatable. The other virus that result in long term consequences and can not be treated. HIV is one of such virus can cause AIDS that can lead to death.

Importance: Over 30 different organism can be transmitted through sexual activity. They can cause no symptoms resulting in the following: genital ulcers, inflammation, pain, infertility, ectopic pregnancy, spontaneous abortion, fetal wastage and premature delivery. STI are now recognized as a serious global threat to the health of populations. The world health organization estimated in 1999 that as many as 340 millions new cases of curable STIs occur each year: 12 millions cases of syphilis, 92 millions cases of Chlamydia, 62 millions cases of gonorrhea , 173 millions cases of Trichomonasis. HIV/AIDS represents a global pandemic. There is no cure for this STI, and it result in death. It is believed that 36.1 million people now live with HIV and AIDS, over 90 % in developing countries. In 2000, about 5.3 million were newly infected with HIV.

Treatment and Management : Diagnosis and treatment of STIs can be difficult , especially in situations where use of accurate laboratory testing is unavailable or prohibitively expensive. As a result syndromic management techniques have been developed. This strategy has numerous advantages particularly used for symptomatic infections . However, disadvantages also exist as it is not able to address the serious and widespread problem of asymptomatic infection.
Integration of services :Family planning clinics are often the only or first contact women have with health services. If clients come symptomatic STI/RTIs and clinic staff are un prepared or un trained , a valuable opportunity to manage may be lost.

Family Planning clients are sexually active women of reproductive age (15-44) years , a group that also at the risk of STIs. However, RTIs services at Family planning clinic may not reach other risk groups such as adolescents , unmarried women, sex workers , menopausal women . Certain procedures like IUD insertions should not be conducted on women with STIs as the providers who may perform may not be aware of these relationship. Lastly if screening and treatment are not feasible , family planning staff can assist with " self assessment of risk" so that women can themselves identify if they are at risk of contracting an STI and can thereby make better decision about choice of contraceptives and disease protection.

79-3

Integrating Youth Friendly Health Services into the Public Health System in Rural India: An Experience of Uttar Pradesh

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Background: Reproductive and Sexual ill health is one of the major causes of morbidity and mortality in young people. Even though programs and policies directed towards improvement of adolescent reproductive health exist, there is a paucity of Adolescent Friendly Health Services (AFHS). Adolescents continue to remain at risk, thus calling for development and strengthening of need based interventions.Objectives: The project on “Integrating Youth Friendly Health Services into the Public Health System in Rural India” is an effort towards improving health status of adolescents by sensitizing and enhancing the capacity of service providers for establishment of Youth Friendly Health Services within their existing health centres at Arajiline block of Varanasi.Methods: The outcome of the project was assessed in light of the standard guideline on ARSH provided by Government of India focusing on client satisfaction and enabling environment through facility assessment and exit interviews of young people.Results: About 65% of the clients responded general health as a reason of visit but only 25% did clearly mention SRH/STI. Nearly 90% of the clients revealed high level of satisfaction from the services which in turn has increased service utilization at the PHCs. The friendly behaviour of the medial/paramedical staffs at the PHCs, provisions of privacy and confidentiality and setting up referral services has been reported as three key reasons for satisfaction. Remarkable change in the attitude and behaviour of community gatekeepers has been observed on the need of AFHS to address the problems of unwanted pregnancy and RTI/STI/HIV resulting in strengthening of Youth Information Centre for dissemination of information.Conclusion: The increased accessibility of the SRH services by the young people has created further demand in the community for continuation of the initiatives. Results have also motivated district level officials to replicate the learning to entire district.

79-4

The Influence of Child Marriage on Fertility, Fertility-Control, and Maternal Health Care Utilisation: A Multi-country Study from South Asia

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Although substantial progress has been made in reducing the prevalence of child marriage (marriage before the age of 18 years), it remains a pervasive problem in South Asia, with girls being disproportionately at risk. Despite the pervasiveness of child marriage and its potentially adverse consequences on reproductive health outcomes, there is relatively little empirical evidence available on this issue, which has hindered efforts to improve the targeting of adolescent health programs. The purpose of the study is to assess the influence of child marriage on reproductive health outcomes and service utilization in four South Asian countries - India, Bangladesh, Nepal and Pakistan.

Data for the study come from the most recent Demographic and Health Surveys conducted in the study countries. The study is based on a sub-sample of women 20-24 years of age reported to be married, divorced, or widowed. Child marriage, defined as first marriage prior to 18 years of age, is further categorized into two categories: 15-17 years and 14 years or younger. Descriptive and multivariate methods are used to assess whether child marriage is associated with fertility, fertility control, and maternal health outcomes and whether these associations are statistically significant. Also, the two 'age at first marriage' categories are tested to see if they are significantly different from each other.

The results of the study suggest that, in the South Asian context, child marriage is significantly associated with many negative fertility and fertility control outcomes as well as with maternal health care utilization. Furthermore, women who married in early adolescence or childhood show a higher propensity towards most of the negative outcomes as compared to women who married in middle adolescence.

80-1

Condom Use at Sexual Debut among Chinese Youth: Findings from a National Survey

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Despite the strong recognition that adolescents' sexual practices without condom use places them at high risk of sexually transmitted diseases and unplanned pregnancies, little is known about the determinants of low condom use among Chinese adolescents. We use data from recent National Youth Reproductive Health Survey, which examines the sexual behavior of over 22,000 youth aged 15-24 in China, to study key factors hindering their condom use. In regression analysis, we found age-related prevalence of condom use at sexual debut and the relationship and partner characteristics' significant effects on condom use. This study suggests that understanding condom use among Chinese adolescents should focus more on their relationship and partner features. The implementation of health promotion activities to increase condom use among Chinese adolescents' sexual practices could be more effective through reinforcing their ability to negotiate sexual and condom use decision-making before sex.

80-2

‘Ultramodern Contraception' Re-Examined: Cultural Dissent, or Son Preference?

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Literature on family planning considers traditional contraceptives - comprising of withdrawal and rhythm - to be ‘ineffective' because the users of such methods seem to be those least motivated to actually control their fertility. While this is true for initial stages of fertility transition, studies have reported that it is the elite sections of the population - women belonging to urban, educated and affluent households, propelled by a reaction against Western technology - who are the main users of traditional contraceptive. The urban elite have both the skill and knowledge to use such methods effectively, while avoiding the side effects and inconveniences of modern methods. This has led to the coining of the term ‘ultramodern contraception'.
This paper critically re-examines the ‘ultramodern contraception' theory, and argues that it has certain limitations:

1. The theory of ultramodern contraception essentially speculates about possible reasons for the high use of traditional contraceptives.
2. Contraceptive choice is conceptualized in static terms, ignoring the possibility of shifts in preferences over different phases of the reproductive life cycle. In particular, the possibility that women may shift from traditional to modern forms of birth control after attaining the desired parity and gender composition is not considered.
3. Conclusions about the effectiveness of ‘ultramodern' methods are based on an analysis of living children, rather than on actual number of pregnancies. The study does not consider the possibility that ultramodern contraceptives may be associated with high levels of use of emergency contraception, induced abortions and incidence of RTI/STI.
4. Inter-state variations in use of traditional contraceptives are also not explained. The analysis does not explain why traditional contraceptives are popular among the elite of West Bengal (25.3%), but low in among elites of other states.

We argue that this calls for a closer look at the use of traditional contraceptive methods and a more exhaustive analysis of the motives for relying such methods and their effectiveness. The analysis uses three waves of Demographic Health Survey (DHS) data for India. Information on currently married women (who are not pregnant) from West Bengal - a major state in Eastern India - is used. Both bivariate and multivariate methods of analysis are employed.

Bivariate analysis reveals that the urban elite of West Bengal rely on traditional contraceptive methods. Analysis of effectiveness of such methods, compared to that of modern methods, indicates that users of traditional methods are able to control number of sons - but not girls. Further, average number of induced abortions is higher among users of traditional methods. Examination of gender parity reveals that once desire for sons is attained, women shift from using traditional contraceptives to modern methods. This is also supported by results of a multinomial logit analysis.

80-3

Breastfeeding, Age at Menarche, and Adolescent Health: Exploring Multi-Causal Linkages in the Philippines

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Recent economic models of human capital formation incorporate a life cycle view (e.g. Heckman 2007), supported by empirical evidence linking early life outcomes and maternal inputs to later childhood and adult well-being. In this paper we use the Cebu Longitudinal Health and Nutrition Survey to examine relationships between maternal inputs and several important variables in human development. In particular, we examine the following relationships identified in the literature:

1. Longer exclusive breastfeeding is associated with earlier menarche (AlSahab et al. 2011) [note that there is not evidence that breastfeeding per se leads to differences in age at menarche];
2. Breastfeeding is associated with greater adult stature and lower BMI (Martin et al. 2002);
3. Age at menarche is associated with shorter adult stature (ie, earlier menarche, shorter) (Nettle 2002).

The three relationships identified above have not been jointly explored in the same data set, to the best of our knowledge. Girls who are breast-fed longer are likely to be taller through direct and indirect nutritional effects (early-life influences) (ie, number 2 above). On the other hand, those with earlier menarche (number 1 above) are likely to have shorter adult stature (number 3 above) (upregulation of hormones at menarche downregulates growth of the long bones). All these relationships are of course superimposed on socio-economic status and other confounding inputs. Studying adult maximal stature as an outcome variable is not unusual in the anthropometric and related literature. However, the age of menarche as a possible intermediate variable between breastfeeding and adult stature has not been explored. We will employ multiple empirical methods (including simultaneous equations models) to understand the link between breastfeeding and these variables.

To the best of our knowledge, no prior studies have investigated these relationships, considered together. Using the Cebu study, we have data on more than 990 Filipino girls born in 1983–1984 who were followed from infancy to adulthood (Feranil et al. 2008). Anthropometric data were collected at follow-up surveys, as well as a host of information on diet, health history, schooling, and household income and expenditures.

While there are many data sets on these factors considered separately, it is unusual to have microdata on breastfeeding (of an infant), her subsequent age of menarche, and her adult stature. We expect to learn much more about the positive breastfeeding-stature relationship by looking at girls alone, and by incorporating age at menarche into the analysis. We expect that he stature-increasing effects of breastfeeding are stronger than the possible indirect reduction of stature by longer exclusive breastfeeding (through menarcheal age), but the analysis we propose will shed more light on the early-inputs problem by jointly analyzing these three important phenomena.

80-4

Age at Marriage and Exposure to Domestic Violence Determining the Extent of Reproductive Morbidity in India

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India is committed to Millennium Development Goals (MDGs) and is a signatory of Convention for Elimination of all forms of Discrimination Against Women (CEDAW), yet at the start of the 11th Five-Year Plan, women's health and well-being have received far less attention than what was required. In India, cultural norms and values promote early marriage of women leading to complications in reproductive and child health. Early age at marriage and childbearing, high parity and poor access to medical facilities are considered to be the most important factors leading to these high prevalence of reproductive morbidity. Moreover, a factor like domestic violence has serious consequences on women's mental and physical health, including their reproductive and sexual health. These include injuries, gynecological problems, temporary or permanent disabilities, depression and suicide, amongst others.

Broadly this study tries to highlight the relationship between socio-economic and demographic factors with various types of reproductive morbidity depending on age at marriage and also to find out the levels and degree of reproductive morbidity among women who experience domestic violence and to suggest appropriate strategies to reduce it. The data source used is National Family Health Survey 3 and a Bi-variate and Multi-variate logistic regression analysis has been done in the study.

The study indicates that age at marriage has significant impact in determining the extent of reproductive morbidity of women in India. It can be said that domestic violence has a considerable negative impact on woman's reproductive health not directly but indirectly.

81-1

Identityfication of Risky Sexual Behavior among Adolescents in Low Income Slum Communities in Mumbai: Issues in methodology, interpretation, and prevention.

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Assessment of risky sexual behavior is somewhat challenging, particularly when adolescents are involved. Measurement of behavior usually relies on verbal reports, which can suffer from a number of biases, both intentional and unintentional.Adolescence is a formative stage in terms of sexual and reproductive maturity in the life of an individual. With sexual activity often initiated in adolescence - within or outside marriage- the risk relating to their sexual behaviour is often underestimated. This paper analyzes the psychosocial and contextual factors that promote risky sexual behavior among adolescents in Mumbai, bearing the burden of 9% of total HIV cases in India. Finding are based on triangulations of information collected through 100 in depth interviews and survey of 175 adolescents age 13-24 from low-income slums selected following three stage sampling design as a part of WAF project in Mumbai.

The presence of ladies bars, video parlors and proximity to brothel based commercial sex opportunities offer an extremely conducive environment for risky social transactions among adolescents. An important misconception among adolescents has resulted in the belief that a lower frequency of intercourse with CSWs may have less likely chances of STD/HIV infections. Analysis of the dynamics of condom use among adolescents in the study communities shows that nearly one fourth of them are not aware of even the source of getting condoms. Among those who had ever experienced sex (irrespective of partners) more than half reported never use of condom. These findings coupled with lack of source of knowledge put the adolescents at a higher level of risk in the context of HIV epidemic and hence merits attention for concerted efforts to improve awareness about safe sex preferably through schools or CBOs adopting peer based interventions.

81-2

Reproductive and Child Health (RCH) Programme in India

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In order to effectively improve the health status of women and children and fulfil the unmet need for Family Welfare services in the country, especially the poor and under served by reducing infant child and maternal mortality and morbidity, Government of India during 1997-98 launched the RCH Programme for implementation during the Governmental 9th plan period by integrating Child Survival and Safe Motherhood (CSSM) Programme with other reproductive and child health (RCH) services. The major components of the programme include the prevention and management of unwanted pregnancy, services to promote safe motherhood including emergency obstetric care, services to promote child survival including essential newborn care, prevention and treatment of infections diseases, establishment of an effective referral system, reproductive services for adolescent health, gender information, education and counseling. The RCH programme is implemented through the district health-care system, which consists of sub-centers, dispensaries, primary health care centers (PHCs), community health centers (CHCs), and the district hospital. Over the years, a massive personnel and public health infrastructure was created consisting of about 1, 37,000 sub-centers, 28,000 dispensaries, 23,000 PHCs, 3,500 urban family welfare facilities, 3,000 CHCs, and an additional 12,000 secondary and tertiary hospitals.

But in spite of this large infrastructure, effective and efficient management of RCH services has been hampered by several financial, policy and management constraints leading to provision of services that are inefficient and inequitable and of poor quality. The objective of the present paper is to trace the achievements and examine the challenges that remain at the policy level implementation level and in the overall socio-economic environment in establishing a program that truly meets health needs.

81-3

Mobile Phones, Internet and Sexual Experience of Youth in Two Provinces in the Philippines

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The use mobile phones and internet in the Philippines has grown over the years and has affected almost every aspect of life. News reports and anecdotes highlight the role of these new technologies in the sexual initiation and behavior of the youth today. Using data from the Young Adult Fertility and Sexuality Study collected in 2010 in two provinces in the northern Philippines, this paper examines the effect of these new technologies on the sexual experiences of the youth in two provinces in the Philippines.

Initial results show there is elevated incidence of premarital sex among those who have mobile phones or use the internet but results are not consistent for males and females. These results are examined further using binary logistic regression to remove the possible confounding effects of socio-demographic and economic factors.

81-4

Youth in Malaysia: The Bare Truth about Teen and Homosexual Tendency

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The World Health Organization (WHO) refers sexuality to a core dimension of being human which includes sex, gender, sexual and gender identity, sexual orientation, eroticism, emotional attachment/love, and reproduction. It is experienced in thoughts, fantasies, desires, beliefs, attitudes, practices, roles and relationships. Sexuality is a result of the interplay of biological, psychological, socio-economic, cultural, ethics and religious/spiritual factors. Youth sexuality, particularly homosexuality has always been a matter of concern to many parties. Furthermore, the issue of homosexuality has already caused much controversy in Malaysia recently. This study aims to explore the homosexual tendency among Malaysian youths.

A nationwide cross sectional study was done using secondary data from Adolescent Health Screening Forms (BSSK/R/1/2008). Data was obtained from randomly selected participants of a national youth programme aged between 18-25 years and was analyzed using SPSS.

A total of 22,750 youth participated with almost equal ratio by sex. Mean age was 19.0 years old. This study revealed that the homosexual tendency was more common amongst male youths (4.1%), 21-24 years old (5.5%) and no formal education (6.1%). There is a relationship between homosexual tendency and sex, ethnicity and educational attainment. Homosexual tendency was found to be significantly associated with risky behavior, abuse, anti-social behavior, substance abuse and family connectedness. Multivariate analysis using logistic regression found that homosexual tendency was two times higher among abused youth followed by youth with anti-social (OR=1.9), risky behavior (OR=1.6), lack of family connectedness (OR=1.7), less religious (OR=1.4) while controlling for age, ethnicity and education level.

The prevalence of homosexual tendency among youths in Malaysia is an alarming issue and many cases are still under-reported. Misunderstanding and a lack of information on sexual diversity have caused a concern for many, as there is a tendency for judgments, stereotypes, discrimination and prejudice towards homosexuality in society. Instead of treating it as a disease, ways and measures of educating youths need to be explored.

81-5

Mariginalized and Untold : Violence and Adverse Reproductive Health Outcomes among Mobile Female Sex Workers in India

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Female sex workers (FSWs) are the most affected population by HIV epidemic within India and elsewhere. Despite research and programmatic attention to FSWs, less is known concerning sex workers reproductive health and HIV risks in relation to experiences of violence. This paper therefore aims to understand the linkages between violence and reproductive health within the conetx of HIV risks among a group of mobile FSWs in India.

Data are drawn from a cross-sectional behavioural survey conducted in 22 districts from four high HIV prevalence states (Andhra Pradesh, Karnataka, Maharashtra, Tamil Nadu) of India between September 2007 and July 2008. The survey sample included 5498 FSWs who moved to at least two different places for sex work in the past two years and are classified as mobile FSWs in the current study. Analyses calculated the prevalence of past-year experience of violence; and adjusted logistic regression models examined the association between violence and reproductive health, HIV risks after controlling for background characteristics and program exposure.

Approximately one-third of the total mobile FSWs (30.5%, n=1676) reported experiencing violence at least once in the past year; 11% reported experiencing physical violence, and 19.5% reported experiencing sexual violence. FSWs who experienced violence reported more likely than those who did not experience violence that they had higher number of pregnancies (adjusted odds ratio [AOR] = 1.2, 95%CI=1.0-1.6), had pregnancy loss ever (31.1% vs. 24.5%; AOR = 1.4, 95%CI=1.2-1.6), had forced termination of pregnancy ever (AOR = 2.4, 95%CI=2.0-2.7), had multiple forced termination of pregnancies (AOR = 2.2, 95%CI=1.7-2.8). Among those who faced violence, FSWs with experiences of sexual violence were reported more often than those with experiences of physical violence that they had inconsistent condom use (inconsistent condom use: AOR = 1.8, 95%CI: 1.4-2.3).

Pervasiveness of violence and its strong association with reproductive health and HIV risks show the crucial need for violence prevention interventions among FSWs in India. Existing community mobilization programs that are primarily focused on empowerment of FSWs should broaden efforts to identify and intervene with violence environments within localities; and promote reproductive health in addition to prevention of HIV.

82-1

Has Conditional Cash Transfer Scheme Reduced Socio-economic Disparity in Accessing Maternal and Child Health Services? Evidence from Northern India

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In India, the National Rural Health Mission (NRHM) in 205 introduced a conditional cash transfer program *Janani Suraksha Yojana* (JSY) to reduce the maternal and neonatal mortality. One of the major objectives of the scheme was to provide accessible, affordable and quality health care to the rural population particularly to the rural population, especially the disadvantaged populations.

This paper (a) examines the current level of institutional delivery after the introduction of the JSY (b) assess whether the scheme is able to meet its goal of equity and (c) how JSY has influenced adoption other healthy behaviors like postnatal checkup, immunization and contraceptive use.

Data from a formative study done by Population Council in rural Bihar during 2010-11 has been used. Additionally, secondary data of National Family Health Survey-3 (2005-06) and District Level Household Survey (2007-08) have also been utilized. Analysis consists of currently married women aged 15-34 years who delivered a child in the three years preceding the survey. Disparity has been examined from four aspects -- religion, caste, education and economic condition. Frequency distribution, bi-variate analysis and different statistical tests have been used. Relative disparity and a summary measure of Gini concentration index have been used to examine the extent of inequality in service utilization. Multivariate regression analysis depicts effect of institutional delivery on utilization of other healthcare services.

JSY has accelerated institutional delivery in rural Bihar; the percentage increase is three folds (18 percent to 54 percent during 2005-11). The increase in institutional delivery is found to be much faster among disadvantaged groups. However, for all the aforementioned four parameters, the relative disparity by religion, caste and class has reduced significantly over the last five years, since JSY was introduced. For example, relative disparity in institutional delivery by caste has reduced from 59 percent in 2005-206 to 3 percent in 2010-11 and disparity by economic class has reduced from 79 to 31 percent. That means poor women, who could not afford to do so because of cost consideration, are now availing the JSY benefit. Logistic regression shows that even after controlling for important individual, household and community level factors, institutional delivery has a strong positive influence on postnatal checkup (OR=2.1, $p<0.01$), child immunization (OR=1.9, $p<0.01$) and contraceptive use (OR=1.3, $p<0.05$). However, for further increase in institutional delivery and thereby other behaviors, messages on importance of delivery preparedness, routine postnatal checkup of mother and the newborn (even if they are fine) within seven days of delivery, addressing myths and misconceptions on contraceptive use and possible temporary side effects of vaccination need to be reinforced through all channels -- inter-personal communication, mid-media and mass media.

82-2

Does Conditional Cash Transfer Improve Maternal and Neonatal Health Outcomes? An Impact Evaluation of Janani Surakhsha Yojana in Uttar Pradesh, India

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Conditional cash transfers (CCT) scheme have become increasingly important in improving health and living conditions in developing countries, though there is growing interest in specifically examining their impacts on maternal and reproductive health outcomes, but most of the large scale surveys are not designed to evaluate these outcomes and there is a lack of evidence as to whether and through which pathways these effects might have been realized.

In India, Safe Motherhood Scheme better known as *Janani Suraksha Yojana (JSY),* launched under National Rural Health Mission, is a CCT scheme which provides a cash incentive to women who give birth in a public health facility or an accredited private health provider. The JSY programme designates Indian states as low performing or high performing and on the basis of this the cash amount varies in order to provide greater incentives in the area of higher priority. Uttar Pradesh, most populous state as well as one of the high focus states of JSY has been selected for the study.

The present paper entails a case-control type post survey design on District Level Household Survey data, 2007-08, for Rural Uttar Pradesh and using propensity score matching method, world's largest conditional cash transfer scheme has been evaluate and its impact on a range of maternal and reproductive health outcomes: (1) antenatal care, (2) skilled attendance at birth, (3) birth in a health facility, and (4) postnatal care has been assessed. Study also examine the choice between type of institution (public/private) preferred for institutional delivery.

Results indicate that robust impacts are found on outcomes at time of birth, for those women who lived in implemented villages, had a significant impact on the probability of women delivering in a health facility, impact estimates show that the programme increased both in-facility deliveries and deliveries by any professional health worker, though antenatal care services have no impact of JSY. Strangely, programme also had a negative on the postnatal care service utilization within two weeks of delivery. This needs cautious explanation and indicative of strategy development to ensure the utilization of full range of reproductive and child health care. Analyzing the impact of the JSY on utilisation by type of provider, estimates for two types of health facility, suggests in favour of the public sector which is counterbalance by a negative impact on utilisation of private facility for delivery. It may be presumed that the private sector caters to the wealthiest who are less likely to be interested in incentives offered by JSY's cash. Potential impact pathways as well as the implications of these findings for program design are discussed in the conclusion.

82-3

An Assessment of out of Pocket Expenditure on Child Bearing Process Post Janani Suraksha Yojana: A Case from Rajasthan

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After five years of the intervention, Janani Suraksha Yojana (JSY) in India has been recognized as the largest cash transfer program in world which aimed to improve health seeking behavior during child bearing process. JSY led to phenomenal increase in institutional delivery. The cash incentive provided under JSY helped, especially the poorer section of society, in meeting 'Out of Pocket Expenses (OPE)' on child birth. With this backdrop, objective of the paper is to assess the OPE incurred by beneficiaries in accessing maternal health services and the extent to which JSY addressed financial barrier.

The study was conducted in four districts (tribal and non tribal) of Rajasthan. Multi-stage sampling was used to select the sample. A total of 424 women, who delivered (JSY beneficiaries and non-beneficiaries) during April 2010-March 2011, were interviewed. Data was entered in CSPro and analyzed using SPSS. Descriptive statistics was used to present the results. The study was funded by UNFPA, Bangkok.

In the sample, the proportion of institutional deliveries was 83%. Out of which, 75% deliveries were conducted in public facilities, of which 96% were JSY beneficiary. Twenty-seven percent of the respondents found incentives under JSY sufficient while for 28%, it was not sufficient.

To estimate OPE per delivery, the expenditure incurred on ante-natal and natal care was added. The OPE per delivery was Rs. 1330 if conducted at home; Rs. 3350 when delivery was conducted at public facility. The same doubled (Rs.7181) when delivery was conducted at private facility. The total expenditure varied with type of delivery, delivery with or without complications and place of ANC.

Based on official records, the cost incurred by government (direct - incentives and indirect - to facilitate institutional delivery) per delivery was also calculated. It could be seen that the government was paying an average of Rs.1595 as an incentive to beneficiary. So for estimating the actual expenditure made by a beneficiary, direct incentive given was deducted from OPE. After deducting, the new OPE per delivery for public facility was just half of the original OPE. For normal delivery (without any complication) the new OPE was Rs. 437 and for complicated delivery it was Rs. 5324. With this, on an average the Government shared 55% of the total cost per delivery. In case of normal delivery, it shared 83% of the total cost; whereas for complicated delivery it shared 29% of the total cost.

82-4

Family Planning Financing Scheme in Indonesia: How so Far it Helps Reduce the Unmet Need for Family Planning

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Indonesia has identified targets and indicators for monitoring the country's progress toward the MDG 5 on maternal health. Some indicators show satisfactory progress, however, some do not. One of little promising indicators is likely to meeting the unmet need for family planning. It is argued that how family planning service delivery in Indonesia is financed could partly explain the gap. This paper intends to set sights on how likely the Government of Indonesia (GoI) designs the financing scheme for family planning services particularly for underserved group couples. The study furthermore aims to explore any possible sources of funding that can be utilized to empower the poor to enjoy family planning services and investigates its sustainability.

The study is a cross sectional research based on family planning financing survey 2011. The survey is conducted in five provinces. The respondents are divided into three groups with three different sets of questionnaires: Family Planning Field Worker/FPFW (5 field workers); village official (5 officials) and poor acceptors (10 acceptors). The data is descriptively analyzed and is quantified within a simple tabulation.

From the perspective of field worker, National Community Health Insurance scheme for family planning has been implemented since 2005. However, unclear data verification and time consuming reimbursements procedure largely prevent the usage. Consequently, funding for creating demand is often inappropriately used to cover the expense of family planning services. Little or no information recorded when FPFW is asked about relative newly insurance launched by the government called childbirth insurance. Village officials appear to be less innovative in mobilizing resources to facilitate their community to receive adequate family planning services. More than 50% of acceptors express that FPFW appears to be rarely seen to provide information about family planning program. They also reveal reluctance in utilizing health insurances provided by the government for a variety of reasons.

It is observable from the present research that poor management of health insurance might avoid the utility of such facility from being used widely by the poor acceptors. Monitoring and evaluation need to be carried out at a regular basis to provide input to develop a more applicable health system and friendly to the users. Powerlessness of village officials to seek alternative to support family planning services from any available funding sources may also be a subject to exacerbate the unmet need for family planning.

84-1

Policy Responses to Demographic Changes - the Case of Malaysia

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This paper deals with the policy responses to social and demographic changes in Malaysia since the 1960s. Data for the analysis come from vital registration, population censuses, household surveys, UN field inquiries, MDG reports and the national five-year Development Plans.

The growing concerns over the negative implications of rapid population growth led to the launching of the National Family Planning Programme in 1966, to reduce the rate of population growth. The emergence of a tight labor market and the perceived need to have a large domestic market for industrial development prompted the government to revise the population policy in 1984, to decelerate the rate of fertility decline, so as to achieve 70 million population in 2100. Subsequently, family planning has been de-emphasized. Despite the "pro-natalist" policy measures, the total fertility rate has continued to decline to 2.3 children today, due to socio-economic development.

Malaysia has made concerted efforts to achieve the objectives of ICPD and MDGs, and two strategic plans on population were formulated to address emerging issues. To achieve the goal of Vision 2020, and in response to socio-demographic changes, the following policy initiatives have been taken:

- The National Family Policy in 2011 to strengthen the family institution that is faced with various challenges.
- Recognizing the increasing role of women, the 1989 National Policy on Women was revised in 2009, to ensure an equitable sharing of resources and benefits of development for men and women.
- With population ageing, the 1996 National Policy for the Elderly was revised in 2011, to meet the changing needs of older people. The National Health Policy for Older Persons was formulated in 2008 to ensure healthy, active and productive ageing.
- Concern over adolescent sexual and reproductive health led to the adoption of the National Adolescent Health Policy in 2001, and the National Reproductive Health and Social Education Policy in 2010.
- Regional development strategies were implemented to bring about a more balanced regional growth, and to reduce over-concentration in large cities, especially in the Klang Valley.
- Policies on international migration have been adjusted periodically, based on the manpower need of the various sectors of the economy.
- A brain-gain program is in place to encourage the return of professionals, and to counter the adverse effects of brain drain.
- Strategic plans are implemented to combat HIV/AIDs, as the pandemic has been a major concern since the 1990s.

This paper analyses the changing socio-demographic situations that led to the policy changes, and the effectiveness of these policies in achieving the objectives. Malaysia's policy initiatives in response to socio-demographic changes could provide useful lessons to other countries in the formulation, implementation and evaluation of population policies and programs.

84-2

Population Policy Debate in Indonesia: a Revival of Population Explosion?

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The results of the 2010 Indonesia's Population Census has sparked an alarm among some scholars, law makers, and bureaucrats, that Indonesia will soon see a revival of population explosion.

Calculation based on official data from the Indonesia's Statistical Office (Badan Pusat Statistik) shows that the annual population growth rate during 2000-2010 was 1.416 per cent, rising from 1.396 per cent during 1990-2000. Furthermore, the number of population reached 237.6 million in 2010, larger than 233.5 million projected by the Indonesia's Statistical Office in 2005. If the rate of growth remains at 1.416 per cent, then the number of Indonesia's population will be double, reaching 475.2 million, in 2060. The reason, they argue, is the loosening of the family planning program since 1998, resulting in stagnant, if not rising, fertility.

With these arguments, they belief that Indonesia should again be paying attention to the threat of population explosion, as it had done since late 1960s with its strong family planning program.

This paper examines this argument by conducting detailed analysis on the statistics and literature review on the relationship between population dynamics and development, as well as learning from other countries' experiences.

Among other things, it concludes that there is actually no threat of population explosion. Fertility level in Indonesia is already low, with TFR about 2.3, much lower than about 6.0 during 1960s. Even, fertility has been below replacement level in some provinces and districts. The apparent rising population growth is likely because of the underestimation of the population in 2000 population census.

Rather than worrying about explosion of babies and children as in the 1960s and 1970s, Indonesia should be prepared for the explosion of older persons, who were the baby boomers in 1960s and 1970s and will be older persons after 2020 and 2030. Moreover, these baby boomers and the following generations will live longer and longer. If fertility continues to go down, Indonesia will soon face shortage of young workers and heavy burden for the younger persons to take care of the rapidly rising number of older persons.

This paper also argues that family planning program should be oriented to quality contraceptive, that is to provide cheap, save, and accessible contraceptive to well informed couples, rather than to reduce fertility. The program should focus on fulfilling the unmet need of contraceptive, those who want to use contraceptive but cannot use it because it is expensive, not save, or not accessible. It should see using contraceptive as a human right, rather than a means to reduce fertility. Moreover, this orientation is also more compatible with the Indonesia's democratic era since 1998.

84-3

Population Growth and Distribution in Arabian Peninsula

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Arabian Peninsula comprises of 22 countries situated between Iraq in the Middle East Asia and Mauritania in the West Africa, having a total population of half a billion. This population - peninsula is divisible by two: Asia and Africa, each division carrying half of the geographical area and population. Yet, the population is heterogeneous and unbalanced with diverse lifestyles and demographics. While the Asian Arab population is advanced in terms of livelihood, living conditions and pertaining socio-economic, demographic and health situations; the African Arab population is not advanced but lives in bitter surroundings and hardships. Still, there are differentials among Arab Asian countries and also Arab African countries.

With an analysis of International data bases – WHO, Demographic Yearbook and Demographic and Health Surveys - this paper looks to (i) examine growth of Arabian population over the last three decades and (ii) explore burden of population in terms of size, composition and density. This analysis is expected to conceive a strategy to integrate and unify Arab population as a single entity.

There are differences among Arab countries on population pressure, resource burden and equilibrium. They share a common language but differ in terms of religion, food habits and demographic practice. While the advanced Middle East Asian countries have demographics competitive and progressed as that of developed countries; African countries' have demographics under developed but comparable with that of South East Asian countries. Efforts are needed to improve poorly performing Arabian populations, for which the fortunate Arabian countries have to play a great role.

84-4

Demographic Transition and its Policy Implications in Iran

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This paper examines demographic transition and its consequences with an emphasis on demographic window in Iran. The results show that Iran is entering the third stage of demographic transition. The window of opportunity which opened in 2006 with its potential population bonus provides a golden opportunity for the Iran's economy. Based on an intermediate scenario of the UN population projections (2009), Iran's window of opportunity will remain open for almost four decades from 2005. This demographic dividend needs to be managed efficiently in order to be transformed into a better and sustainable economic growth. Thus, there is a need for a comprehensive population policies to not only manage the window of opportunity but also to introduce policies for maintaining fertility at its current level so that Iran will not be facing the prospects of very low fertility experienced in other Asian countries.

85-1

Unmet Contraceptive Need in South Asian Countries

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Over the past decade, family planning (FP) has received less attention in South Asian countries, resulting in considerable unmet contraceptive need (UCN). UCN exists, when couples willing to delay or stop childbearing are unable to do so because of lack of FP services, especially the method (s) of their choice.

The objectives of this paper are to examine the extent of UCN and identify strategies to address such needs in South Asian countries.

The paper is based on data from Demographic and Health Surveys of South Asian countries and other relevant documents.

Between 1950 and 2000, the total fertility rate in Asia declined by over 50% to reach an average of 2.8 births per woman and the contraceptive prevalence rate increased from about 15% to around 60%, although with variations across countries. Those aged 10-24 years in South Asia account for one third of the total population, and are in greater need of quality FP services.

Over 150 million married women of reproductive ages are estimated to have UCN in developing countries: 61 million in Asia, with India having the highest number (31 million women). In the developing world, the prevalence of UCN among married women is about equally accounted for by women who want to space childbirths with those who wish to limit births, although there are significant variations. The extent of UCN is high at 28% in Nepal and Maldives, followed by Pakistan (25%), Afghanistan (23%), Bangladesh (17%) and India (13%). Among the South Asian countries, unmet need is lowest in Sri Lanka at 7%.

The major obstacles to contraceptive use, resulting in high UCN, include lack of knowledge about contraception, its use and its availability; concerns about health effects of FP methods; high costs; and cultural or familial objections. By reducing these obstacles, family planning programmes can help reduce the extent of UCN by: highlighting the importance and benefits of FP; educating couples about the range of methods, their possible health risks and their proper uses; training service providers in proper management of side effects of FP methods; helping couples find appropriate contraceptive methods; improving service delivery systems; and subsidizing the cost of contraceptives and ensuring adequate funding for programmes.

Over the past decade, FP did not receive due attention in South Asian countries, resulting in considerable unmet contraceptive need. The primary obstacles to contraceptive use should be addressed efficiently and effectively by the governments in order to reduce the extent of unmet contraceptive need in South Asian countries.

85-2

Think and Act Local: Lesson from Changes of Birth Control Methods on Family Planning Program in Indonesia

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The rate of growth population of Indonesia now is 1.49% per annum and if this growth rate is not reduced then in 2011, Indonesia's population will reach 241 million people. According to high number of babies born in Indonesia which reaches 4-5 million infants per year, data showed that high-born primarily occur at area of district with a success rate of Family Planning Program (Keluarga Berencana) is low. Success of KB program is not only depending on size of funds allocation, and provision of facilities to officer, but also on communication skills of KB officers when talking with local people. This situation is happen in Sukahati village at Bogor District in province of West Java, Indonesia.

Family Planning method with pills and injection has not been effective to delay birth. Routines activities to swallow a pill (1 tablet/day with a maximum of 24-hour pause) and injection (once every three months) are cause of why this method is ineffective. This makes field officers attempting to divert use of birth control to a method which is more accurate and have a long-term period (maintain for eight years) such as Intra Uterine Device (IUD), medical surgery, operating medical women (MOW) and operating medical men (MOP).

Research concern is how the officer persuade local people through conversation to use and have a proper understanding of KB program so they would use birth control methods that more appropriate. This research use Coordinated Management of Meaning (CMM) theory to analyze conversation between local people and field officer. Research was done by qualitative approaches. Statements that occur in conversations will become unit of analysis. Data collection is carried out by observation and in-depth interviews of both staff in a field and local people.

The results showed that social reality as delivered by officers who wanted to change method of birth control has not been well understood by local people. Saving money, and less children at least will reduces hassles in household work, it is not a right reason anymore. In addition, attitude of audience (mostly are housewife) that is not enthusiastic when a man did explanation will describes that officer has less sensitive of gender issues among local people; compliance to religious leaders over to field worker suggested there is an informal structure within local people who should be approached at first; low level of understanding for different family conditions; communication that is less interactive (one way) made a response from the participants are few. According of theoretical implication, CMM Theory which is developed in West society, this theory ignores value of premises such as existence of gender issues among local people, and need for an informal approach that is particularly as living value in East.

85-3

Sex Selective Abortion in Vietnam: Practice and Policy

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The Population and Housing Census in 1999 provided evidence that the sex ratio at birth in Vietnam (then 107 males per 100 females) might have started to rise. In response, the government launched prohibitions forbidding sex determination and sex-selective abortions in 2003. However, the 2009 Census showed that this imbalance had reached an alarming level, with a national sex ratio at birth of 112. The census data raise some questions on the effectiveness of these public policies.

How have regulations prohibiting sex selective abortions been practiced in Vietnam's health sector? Is there any insufficiency in these regulations? Are the bans effective in stopping sex selective abortion?

Qualitative study conducted between January and December 2009. The data include observations; interviews with 35 women seeking ultrasound scans and abortion at an obstetrical and gynecological hospital; interviews with doctors providing the ultrasound and abortion services; and interviews with managers and policy-makers on reproductive health.

In Vietnam, prohibitions forbidding sex determination and sex selective abortion already exist but are not consistently or strictly enforced. To date, the bans do not appear to be effective in stopping sex selection. The loose management and supervision in providing and using reproductive health services as well as commercialized health care have created space for practicing sex determination, followed by sex selective abortion.

A ban alone is unlikely to change the circumstances that lead to sex selection. The legislation has to be strictly enforced by practical actions and close supervision. It is necessary to improve ethic ideals among providers and have broad social measures to improve the status of women.

85-4

Family Planning Sub-Sector of Sector-Wide Approach (Swap) of Ministry of Health - Experiences from Bangladesh Health Sector Reform

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Bangladesh Health sector reform started during 1998, a transition from more than 128 projects into a single consolidated sector programme, adopting sector-wide approach (SWAp). Third SWAp-Health, population, nutrition sector development programme (HPNSDP) started from July 2011, will continue till July 2016. This review paper will have potential to share how the Family Planning (FP) sub-component has reflected in sector programme adopted by the Ministry of Health and Family Welfare (MOHFW) to address unmet need and policy issues.

Bangladesh has achieved progress against the backdrop of low literacy rate, low status of women, low income per capita, and social turbulence and so on. Realizing the situation, conversions of large population as human resources were not properly addressed. Despite this, due to past high fertility and falling mortality rates, Bangladesh's population has a tremendous growth potential built into its age structure. So, population continuous to remain as the nation's number one problem as well as the number one cause of poverty.

The HPNSDP identifies service delivery priority focuses on the extension of FP services, increased usage of family planning before and after the first birth and the introduction, and the promotion and usage of Long Acting and Permanent Methods of contraception. Other initiatives are -promoting delay in marriage and childbearing, strengthening FP awareness building efforts through mass communication and IEC activities, using different service delivery approaches for different geographical regions. Ensuring uninterrupted availability of quality FP services closer to the people, registering eligible couples with particular emphasis on urban areas to establish effective communication and counseling and providing incentives for long acting contraceptive performance**.**

Considering the fact, government has been initiated to update the population policy 2004. Major successes in population sector programs were achieved in expanded access to family planning services with introduction of a broader range of modern and effective methods. Strong policy and investment interventions have led to continuous reduction in the annual growth rate of population 1.48 (2007). The total fertility rate (TFR) went down from 3.3 in 1996-97 to 2.7 (2007). The contraceptive prevalence rate (CPR) reached 55.8% in 2007.

Replacement level of fertility by 2016 at the earliest is the priority vision of the GOB. In line with this vision present TFR of 2.7 children per woman (in 2007) needs to be reduced to 2.1 children per woman to attain NRR=1 by 2016. To achieve replacement level of fertility by 2016, corresponding CPR have to be increased to 75% by mid-2016 from 55.8% in 2007.

Further efforts proposed to shift FP use patterns towards more effective, longer lasting and lower-cost clinical and permanent methods covering low performing areas. Diversified and country wide mass scale effective family panning service delivery remains a great challenge.

85-5

Progesterone Vaginal Ring: Meeting the Contraceptive Needs of Postpartum Women

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A wide range of contraceptive options provides women and men with choices as they progress through their reproductive life cycles. Program experience supported by simulation data indicate that adding a contraceptive to an existing method mix enhances client choice and contributes to increasing contraceptive prevalence. The 1994 Cairo conference called for: 'Governments.....should increase support for basic and applied biomedical, technological, clinical, epidemiological and social science research to strengthen reproductive health services, including the improvement of existing and the development of new methods for regulation of fertility that meet users' needs and are acceptable, easy to use, safe, free of long- and short-term side effects and second generation effects, effective, affordable....for different phases of the reproductive cycle...."

Current biomedical research focus is on developing contraceptives that can be safely used by healthy men and women, be acceptable to them, and can provide medical benefits in addition to contraceptive protection (Sitruk-Ware, 2006). Users and potential contraceptive users indicate preference for methods that are affordable, highly effective and reversible, easy to use, protects their fertility, and under their control. These and other factors such as user freedom to choose a contraceptive, full information about the method and family support are key facilitators of contraceptive continuation (FHI and ACQUIRE, 2006; RamaRao and Mohanam, 2003; Scott and Glasier, 2006).

Unmet need for contraceptives continues to be a reality in a number of Asian countries ranging from 5 percent in Vietnam to 28 percent in the Maldives. These averages mask higher levels of unmet need among those who are early in their reproductive cycles, postpartum women, and those with uncooperative partners (Darroch, Sedgh and Ball, 2011). Clearly a significant portion of unmet need can be addressed by the development of new and improved contraceptives.

The progesterone-only vaginal ring (Progering®) or PVR is a new ring-shaped contraceptive composed of silicone elastomer with progesterone dispersed throughout the ring matrix. It is designed specifically for use by breastfeeding women to extend the period of lactational amenorrhea and promote longer birth spacing. It delivers a daily dose of 10mg of progesterone and can be used continuously for up to three months (90 days). The PVR can be used for up to one year (4 rings) and is as effective as an IUD (Sivin et al 1997) provided breastfeeding episodes do not decrease below four/day. It is an easy-to-use, reversible, user-controlled method that does not require a trained health provider for insertion and removal.

In this paper, we discuss the contraceptive needs of postpartum women, the health system infrastructure required to support the provision of the PVR, and the potential this method has to contribute to the achievement of policy and program goals specifically Millennium Development Goals 4, 5 and 8.

86-1

Assessing the Progress of Child Immunization in India, 1992-05

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In India, since the introduction expanded programme on immunization (EPI) in 1978 there has been plenty of efforts and programmes to improve child immunization by government and international donors. But still there is a glaring gap between the target and achievement even after several years. So the present study attempts to understand the progress of child immunization in India and its states using three rounds of National Family and Health Survey (NFHS) data 1992-05. The paper also examines dropout rate by different vaccines and the adjusted effect of selected socio-economic, demographic, and programmatic factors on full immunization coverage in India using pulled data from the three rounds of the survey. Bivariate techniques have been used to understand the differentials and changes in immunization coverage. Multinomial logistic regression model is used to know the net effect of socio-economic and programmatic factors affecting child immunization.

Results indicate a steady increase (35% to 44%) in full immunization coverage during 1992-2005 at national level, but the pattern is different cutting across the states. Based on the changes in full immunization coverage during 1992-05, states are classified into four groups namely:

Group A: States where coverage of full immunization has decreased during 1992-1998 but increased in 1998-2005. These states are: Bihar, Assam, Madhya Pradesh etc.
Group B: States where coverage of full immunization has increased during 1992-1998 but decreased in 1998-2005. These are: Punjab, Andhra Pradesh, Maharashtra etc.
Group C: States where coverage of full immunization has continuously increased over the period e.g. Orissa, Kerala, Uttar Pradesh etc.
Group D: Only Gujarat noticed a constant decline in full immunization coverage over the period.

Percentage of children fully inoculated is low for higher birth orders, women of older age groups, and women with low education groups. The drop out are getting down among socio-economic and demographic backward states where child immunization has improved substantially. The measles vaccination has shown considerable improvement contributing to improvement in child immunization. Mother's education, standard of living, mass media exposure, and availability of health card is a significant predictor in explaining the full immunization coverage irrespective of time.

86-2

Measles Vaccination Coverage in India: An Alternative Approach for Progress Assessment

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In recent years several studies and reports have monitored these indicators to assess the progress toward MDGs. Without exception, most of these reports employ measures such as rate-ratios and rate-differentials to facilitate inter-temporal, inter-regional and inter-group comparisons. It must be noted that use of rate-ratios and rate-differentials are insensitive to two elementary concerns; first, the focus exclusively rests on population averages thus ignoring the inherent individual and group inequalities associated with progress and second, they do not account for differences in the level of the health indicator against which comparisons are displayed.

This paper proposes an alternative method for progress assessment that addresses the concerns regarding equitable progress and differential base-levels. Such an improved measure is valuable for assessing the performance of various regions and will inform stakeholders regarding the content of the achievements or the obverse.

The progress assessment index (P), is developed in two steps. In the first step the average health outcomes where adjusted for income-related or inter-group health inequalities and in the second step these inequality-adjusted averages are adjusted for level-differentials to value the progress. The progress assessment index can be applied to assess progress in case of health achievement indicators and health failures indicators. An illustration of the progress index is made by evaluating the progress in the receipt of measles vaccine in India and its states. The data for this exercise was obtained from the National Family Health Surveys (NFHS).

Main conclusions:

- The analysis informs that there higher income-related inequality in the distribution of measles vaccine particularly among the backward states of the country. Moreover, these states also suffered from higher inter-group disparities in the distribution of measles vaccine.
- At the all-India level it was observed that female child from backward social groups (Scheduled Caste or Scheduled Tribe) and residing in rural areas were the most disadvantaged in receipt of basic health care. There were wide disparities across and within states with groups residing in backward states such as Bihar and Uttar Pradesh receiving much less coverage than compared to those residing in southern states of Tamil Nadu and Kerala.
- The progress index suggests that Tamil Nadu, West Bengal and Kerala are the best three performers in the country whereas Gujarat, Rajasthan and Uttar Pradesh are among the worst performers.
- Tamil Nadu perhaps can be the first state to achieve complete immunisation coverage followed by Kerala. The performance of West Bengal although remarkable, needs to be carefully monitored for sustainability.
- It is disconcerting to note that a rapidly developing state such as Gujarat has not progressed well in vaccination coverage.

86-3

An Examination of the Association between Contraception Usage by Mothers and Nutritional Status of Children in India

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The knowledge of family planning methods is universal in India, with over 99 percent women reporting knowledge of one method or the other. However knowledge of all modern methods is only 49 percent. The contraceptive prevalence rate for currently married women in India is 56 percent. Contraceptive use among currently married women varies markedly by education, religion, caste, and wealth. As consequences, there is unwanted pregnancy that again resulted into children with poor nutritional status. Child malnutrition is a serious problem in India as 48 percent of children under age five years are stunted, 20 percent of them are wasted and 43 percent are underweight. Usages of contraception will reduce the number of pregnancy and growing number of children with poor nutritional status.

Objectives:
1) To examine the association between mothers's knowledge of family planning and children's nutritional status.
2) To examine the influence of contraception usage by mothers on children's nutritional status.
3) To build a final model to study the inter-linkages between usage of contraception and children nutritional status after controlling for various socio-economic and demographic factors.

Data have been used from the third round of National Family Health Survey (2005-06) carried out by International Institute for Population Sciences (IIPS), Mumbai.

The usage of contraception by mothers of those children for whom nutritional status available has been categorized into four types: 1) using modern methods, 2) using traditional methods, 3) non-users intend to use and 4) does not intend to use. Children's nutritional status has been measured by stunting, wasting and underweight. Bivariate cross-tabulation with chi-square test, ANOVA, multiple logistic regression analyses have been carried out in this paper.

Bivariate analyses show that prevalence of stunting, wasting and underweight is linked with usage and type of contraception used by mothers. The prevalence of stunting, wasting and underweight among children whose mothers are using modern contraceptive methods respectively are 44.0, 17.3 and 38.2 percent. On the contrary, the prevalence of stunting, wasting and underweight among children whose mothers are not using any contraception currently are found to be 51.4, 21.7 and 46.2 respectively. Children with many siblings are found to be having poor nutritional status in comparison to children with relatively small numbers of siblings. This finding also implies the significance of family planning in nutritional status of children. Logistic regression models exhibit that children with mothers using modern contraceptive methods currently are found to be less likely to have poor nutritional status in comparison to children with mothers having other contraceptive usage status.

The linkages between importance of family planning and healthy children should be emphasized in policy making and should be implemented among target population.

86-4

Do Inequalities among Malnourished Children is Decreasing in India

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Eleven million children under age five die in developing countries each year and 60 percent of the deaths are due to malnutrition and hunger-related diseases. Despite of the higher economic growth India is yet to achieve a good nutritional status for her people especially children and women. It is home to 42 percent of the world's underweight children and 31 percent of its stunted children. Child malnutrition is responsible for 22 percent of India's burden of disease.

To determine key socio-economic indicators of malnourishment among children and their contribution to child health inequalities and examine the trends of health inequalities with respect to child malnutrition in India

The study has used data from three rounds of National Family Health Survey (NFHS) conducted in 1992-93, 1998-99 and 2005-06. The information on anthropometric indicators (weight-for-age, weight-for-height and height-for-age) for children below three years of age is provided; however the study is restricted to 'weight-for-age', underweight as it is considered to be a comprehensive indicator of child nutritional status. In the first stage of analysis child health disparities are examined using average group differentials according to socio-economic and demographic characteristics. In second stage, study uses concentration indices (CIs) to measure inequalities in child health indicators. In the third stage the decomposition of socio-economic inequalities into their predictor is carried out among malnourished children.

The results indicate that the prevalence of malnourished children in India, on an average, has declined by six percent (from 53% to 47%) during 1992-1998, then stagnated, reached 46 % in 2005-2006 with a decline of less than one percent during 1998-2005. The results of decomposition analysis for all three rounds of NFHS points towards household poor economic status as the major contributor of inequalities; however there is an increase in its contribution from 50 percent in NFHS I to 65 percent in NFHS II but declines to 59 percent in NFHS III. Mother's illiteracy is also a major contributor of inequalities.

Children are the future of any nation and their health needs due attention. The decomposition analysis brought into light that average health indicators are insufficient for determining the right approach to health intervention programs. Health policy interventions have to focus ideally on both health averages and within and between group inequalities based on varying contributions of socioeconomic determinants. The health goals for India have to majorly focus on equitable access to quality health care across varying socioeconomic spectrum to achieve a healthy and sustainable India. Although the percent of underweight children has declined in India over time still achieving health equity remains a critical challenge of India's health mission.

87-1

Unmet Needs for Family Planning: Implication for Child Survival in West Africa

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Globally, about 10 million children under the age of five die every year. With 41% of these deaths occurring in the sub-Saharan Africa, the region is indeed the largest contributor to the statistics on child mortality. Meanwhile, family planning is widely recognized as the pillar of safe motherhood and it is also associated with improved child health outcomes. To date Nigeria has 20% unmet need for contraceptives, 10% contraceptive prevalence rate (CPR), 62% of birth occur at home, and about 1 in 5 children die before age five. These statistics show that the country is not on course to attain Millennium Development Goal 4 (MDG4). Also, in Ghana, about one-third of women of reproductive age have an unmet need for family planning, contraceptive prevalence rate is 24% and under-five mortality in the country stood at 80 per 1000 live births. Although, under-five mortality is decreasing in Ghana, the country still falls short of Millennium Development Goal targets. Thus, we hypothesize that unmet needs for family planning could result in increased risk of under-five mortality. However, evidence is sparse on the relationship between unmet needs for contraception and child survival. This study, however aims to address this knowledge gap.

This study draws on 2008 Nigeria Demographic and Health Survey and 2008 Ghana Demographic and Health Survey. We restricted analysis to women who have had at least one live birth. The outcome variable is defined in this study as risk of dying before the fifth birthday. The main explanatory variables were contraceptive use and unmet needs for family planning. Using chi-square test, we examined the relationship between unmet needs for family planning and risk of under-five mortality. Also, multivariate analysis was performed to examine the implication of unmet needs for child survival while controlling for the effects of other covariates.

Preliminary findings indicate that, in both countries, contraceptive use was low and unmet needs were high unmet. Nigeria and Ghana data showed that the respondents who were non-user and those who had no intention to use contraceptives were more likely to report under-five deaths than their counterparts who were using contraceptives ($p<0.001$). Also, respondents who reported unmet needs for family planning had higher risks of under-five mortality relative to those who had met needs ($p<0.001$).

The findings of this study suggest that without a concerted effort to address the present levels of unmet needs for family planning in the West African sub-region, attainment of MDG4 may be a mirage in the region. In conclusion, this study suggests that many countries can still be placed back on track towards the attainment of MDG4 if the present levels of unmet needs for contraceptives are adequately addressed

87-2

Causes of High Infant Mortality Rate and Impacts of Policies and Programmes

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In Mongolia, the infant mortality rate went down from 31.3 to 20.2 per 1,000 live births over the past 10 years and the last 5 years' average (19.6 per 1,000 live births) almost satisfies the level set forth in the Milennium Development Goals. However, the neonatal mortality rate increased by 2.8 points, from 10 to 12.8 per 1,000 live births, within the same period of time. About half of infant mortality occurred at neonatal stage and 80 per cent of neonatal mortality occurred at early neonatal stage. The fact that early-stage neonatal mortality rate is high shows that infants are dying when are greatly dependent on skills of obstetricians and neonatologists.

This study focusing on causes of high infant mortality rate in some area of Mongolia and examines impacts of policies and programmes. Secondary data analysis and indepth-interview are used as study tools.

The key findings of the study indicate that infant mortality rate is high in *soums* (remote rural) isolated from *aimag* (province) centres, with dense population, with a great population mobility, home to gold mining, and in the zone of high mountains. In terms of health care services, the causes for high infant mortality rate are weak supervision of expectant mothers; assistance and services before, during and after the birth do not meet quality requirements; supply of medical equipments for infant assistance and services is insufficient; and that there is lack of pediatricians and neonatologist in *aimags* and *soums*. On the other hand, in terms of social aspects, high infant mortality rate is attributed to low social status of mothers, various chronic diseases and poor health knowledge and education. This social cause contributes to complicated delivery, premature birth, as well as birth defects. In addition, as a result of trainings and instructions for doctors, registration and information mechanism of infants are improving and it actually helps distinguish premature birth from miscarriage. It is also possible that harsh, unpredictable weather conditions and natural circumstances contribute to infant mortality. But the impact is considered to be indirect by creating various obstacles in terms of providing medical assistance and services.

Priority measures taken in rural areas are capacity building for doctors and professionals and provision of hospital equipments and devices. Also, economic leverages are being utilized to maintain doctors to work for a longer period of time, but its effect is insignificant because of low living standards and underdevelopment. Even though the policies and programmes are developed instantly in collaboration with the Ministry of Health and *aimags*, according to WHO recommendations, local-specific unique qualities are not reflected and monitoring of implementations is weak.

87-3

Does Family Planning Reduce Infant Mortality? Evidence from Surveillance Data in Matlab, Bangladesh

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Analyzing the effect of family planning on child survival remains an important issue but is not straightforward because of several mechanisms linking family planning, birth intervals, total fertility, and child survival. Many of the apparent effects of child-bearing patterns on child mortality are correlated with other factors (see for example, Hobcraft et al. 1985), which needs to be taken into account in the analysis. A recent review conducted by Yeakey et al. (2009) emphasizes the policy relevance of studying the behavioural pathways linking contraceptive use to birth spacing and timing of births and to infant mortality. This is exactly where the current study aims to contribute.

Using prospective panel-data from 1982 to 2005 in Matlab, Bangladesh this study builds a reduced form dynamic model jointly explaining infant mortality, whether contraceptives are used after each birth, and birth intervals. Each part of the model incorporates unobserved mother specific heterogeneity, and the various unobserved heterogeneity terms are allowed to be correlated, so that the estimates of the parameters reflecting the causal effects are consistent under general assumptions about the nature of heterogeneity. Furthermore, we perform simulations aimed at uncovering the linkage between contraceptive use, birth spacing and infant mortality, taking into account the effect of an increasing fraction of first- born children on the aggregate infant mortality rate.

Results confirm the favourable effects of family planning programs on child survival for second and higher birth orders that work through birth spacing - and our simulations imply that contraceptive use has reducing effect of infant mortality among second and higher order births by about 7.9 percent. (11 infant deaths per 1000 live births).

Results by maternal education level show that the benefits of contraceptive use would be particularly large for the lowest socio-economic status group, mothers without any education. This is because they have the lowest contraceptive use in the benchmark situation (84.4% compared to 88.6% for the complete sample) but also because they have shorter birth intervals and the most vulnerable children (their infant mortality rate among children of birth order 2 and higher is 49.5 per 1000 births in the benchmark situation, compared to 39.6 per 1000 for the complete sample). Using contraceptives after each birth, birth interval lengths in the no education group would increase by 6 months on average, and infant mortality among higher order births would fall by 8.7% (compared to 7.9% for complete sample). Their total infant mortality rate would fall by 3.2% (2.9% for complete sample).

This leads to the policy implication that strengthening family planning programs helps to reduce infant mortality. Since this is particularly the case for lower socio-economic groups, it also improves equity across socio-economic groups.

87-4

Could Infant Mortality Analysis with Time-Invariant Covariate Effects be Misleading? Evidence from Urban Turkey

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This study investigates whether the usual practice of conducting infant mortality analysis with time-invariant covariate effects could be misleading. For this purpose, it compares the results of an infant mortality analysis that does not allow for time-invariant covariate effects with the results of one that allows. The comparison of cumulative regressions with split regressions reveals that the effects of many covariates change substantially by the age of an infant. Considering different dynamics are associated with infant mortality in urban and rural areas and three-quarters of the population lives in urban areas the study is limited with the analysis of urban Turkey. The study uses data from Demographic and Health Surveys (DHS) conducted in Turkey between 1993 and 2008. We pooled 4 sets of DHS data to provide a large sample size and increase statistical power. Information on birth and death date used in the study is based on retrospective birth histories of women age 15-49. In these surveys each woman was asked for a history of all her births, including the month and year of each. If the baby died before one month, date of death is recorded in a daily basis. In addition to the birth histories of the women, information on a wide range of of individual (on the mothers and children), household and community-level variables is collected in TDHS s. Event history analysis is applied to measure the impact of a rich set of variables on infant mortality risks. Mother's age, mother's education, birth order, preceding birth interval, prenatal care, place of delivery, gender of the child, family wealth, region of residence and ethnicity included in the analysis as main independent variables. The results show cumulative analysis cannot uncover certain changing covariate effects over the age of the infant, which are uncovered by the infant mortality analysis with time-variant covariate effects. This is best illustrated in this study with regard to the relationship between late motherhood and infant mortality. All early neo-natal, neo-natal, and infant mortality analyses with time-invariant effects show that late motherhood is highly associated with mortality. However, the split-time analysis that allows for time-variant effects reveals no evidence of an association between late motherhood and mortality after the first week of children. The significant association in the neo-natal as well as infant mortality analyses with time-invariant effects arises because of the strong relationship in the early neo-natal period.

88-1

Importance of Traditional Pottery Making in the Household Economy of Thongjao Village, Manipur, India

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The importance and contribution of traditional craft making in rural livelihood, especially in poor countries have been widely acknowledged in development studies. These studies revealed the variations of income earning from crafting sector in different parts of the world; relating to the question of providing a substantial income or not for household sustenance. It is within this context and based on a small micro level study, this paper set out to examine the role and importance of traditional pottery making to the household economy in Thongjao village, Manipur, India. It explores the underlying factors of the rural artisans' involvement in this activity and how they view their traditional industry in providing livelihood security in the face of increasing economic hardship. This research adopted focus group discussion, followed by an open-ended schedule survey using stratified random sampling method. A sample population of 52 individuals comprising of 30 crafters and 22 sellers were interviewed. The study found out that craft making/selling contributes on an average of 57± 24 percent to the total monthly income of the households; involving at least two (2) individuals or 38 percent of the household members. Research results also revealed that pottery work is mainly dominated by the vulnerable group of middle-aged women with poor level of education and assets, engaging in primary basis to overcome adversity and meet their basic needs. Majority of the households (65 percent) had no household member with a formal job and lack alternative means relying mostly on crafting work for their survival. But, there exist a wide range of variation of income earning between the producer and seller as the sellers capture the surplus income by marketing the products. The paper also offered an insight into the intrinsic value of craft-making related to the long socio-cultural life of these people beside its economic aspect. In addition, the study also showed the changing nature of crafting activity focussing on its growth and gender aspect as to how men took up the roles of so-called women dominant activity in the midst of lacking alternative activities. The paper also revealed the organization of the craft from production to marketing and internal co-operations among the individuals and various groups for their sustenance. The constraints faced by the marginal artisans particularly by the producers in the process of production such as lack of proper work place, scarcity of raw-materials, seasonality of the work, health problems etc. are also clearly discussed. The paper concludes by discussing the reasons for sustenance of this craft in this village/state and provides a convincing explanation for valuing and encouraging traditional crafting sector for strengthening the livelihood of communities in rural areas.

Keywords: Livelihood; Security; Traditional; Pottery; Manipur

88-2

Human Development Status of a Marginalized Tribal Group in an Industrialized State of India: A Case of Gujarat

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Gujarat has grown at a high rate of 10.5 per cent during the last two financial years where country's economic growth has been between 7.5 to 8.0 per cent per annum. This growth is the consequence of increase in the share of manufacturing sector from more than 9.0 per cent in 1991 to 16.0 per cent in 2010 in Gross State Domestic Product (GSDP). Higher growth rate is generally supposed to benefit the human development, which has not happened in case of Gujarat. This is clearly evident from the UN's Inequality Adjusted Human Development Report (2011) in which Gujarat state is ranked at the 10^{th} position among 15 major states of India, particularly in the health and education levels. Similarly, the India Human Development Report (2011), *Planning Commission*, Government of India, indicates that Gujarat has poor malnutrition levels, which is also quite high among the marginalized, particularly the tribes. The performance of health indicators among the tribal groups of Gujarat is worse than those at the National level.

The paper tries to investigate the changes amongst the *Dungri Bhil* tribe of Gujarat based on the field investigation conducted in Oct 2011 in the 12 villages of Danta *Taluka* (block) in Banaskantha district. The results are based on the analysis of socio-economic survey, rapid rural appraisal and secondary data for the district and Taluka. The findings show immense disparity amongst the tribal and non-tribal segments mainly in terms of economic and social parameters. The lack of infrastructure, particularly health, education facilities and transportation facilities as well as lack of extension programmes in the study areas has led to further marginalization of the tribes. This may be due to insensitive nature of planning measures by the State. The paper argues in favour of establishing equity amongst the social groups in an era of globalised state economy which has reaped benefits from huge capital investments in industries and infrastructure in the State.

88-3

Poverty and Ethnicity in China

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China stands out as a country with a large ethnic diversity comprising 55 recognized minorities, jointly accounting for 8 percent of the total mainland population. China is also a country experiencing one of the largest economic and social transformations in the last decades induced by economic reforms initiated at the end of the 1970s.

The aim of this paper is to investigate the extent of economic and social inequalities on the base of ethnicity in China, more specifically poverty rates and wellbeing, as well quantifying the contribution of different potential factors. We will investigate i) how much higher poverty can be explained by minorities dropping out of school early, living in the poorest areas of the country, having weaker labor market attachments, or having more children and single-parent households; and ii) how much can be explained by these groups facing discrimination in their wages, being more vulnerable to larger families, obtaining lower returns to education due to the lower quality of education, etc. To disentangle which part can be and which cannot be explained by characteristics is a relevant matter, as they are both important but have different natures. Differences that come from a compositional effect indicate that the bad performance of disadvantaged groups is driven mostly by their unequal access to education, family planning, or the labor market or driven by the fact that they live in more deprived areas. The part that cannot be explained suggests that the disadvantage more likely comes from schooling, labor market participation or location having a different impact on poverty and deprivation within these groups, which could be caused by the prevailing discrimination in the labor market, different perceived quality of education, or different degree of vulnerability due to unobserved factors. The causes associated with the former are more easily solved through redistributive policies at different levels than those coming from the latter, which tend to be more structural. The identification of the factors more closely associated with the racial gap in poverty could be of help in ascertaining which would be the racial implications of any public policy, even if it is not directly aimed at reducing racial inequities, such as conditional transfers seeking a larger attachment of poor children to schooling or adults to the labor force, regional development policies, etc.

For the analysis we will use microdata coming from sources such as the China Household Income Project hosted by the University of Michigan, the Censuses or the Luxembourg Income Study 2007 (Wave III). For decomposing the poverty gap between ethnic groups into its explained (characteristics effect) and unexplained (coefficients effect) parts, we will use different available econometric techniques (such as Oaxaca, 1973 and Blinder, 1973, Yun, 2004; DiNardo-Fortin-Lemieux, 1996).

88-4

Socio-economic Status and Living condition of Low Income families in Kolkata

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Kolkata being the erstwhile capital of India still lives on colonial legacy. In the city of majestic palaces and monuments 'poverty and pride' exist side by side in form of old dilapedated buildings, poor hutments, slums and unplanned buildings. People living in those low income housings are not very poor, middle income families are often forced to live in these colonies due to severe housing crisis. These families are mainly second or third generation migrants from North India and erstwhile East Pakistan, they are engaged in various occupations and quite educated, but still they face acute space shortage, housing crisis, shortage of infrastructures just like slum dwellers. the picture is not same everywhere. in the north, south and central Kolkata, land value is very high, therefore, middle and high income group people are also found in low income colonies, but in few deprived locales people are living in extremely deplorable condition. Low income colonies in Dhapa (eastern fringe of Kolkata) and Metiabruz (west Kolkata) are living in exclusion from rest of the city. Transport connectivity and health care facilities are not too good. therefore, in Kolkata the word slum or Bustee does not refer to poor peoples' dwellings only, middle income group people also reside there, depending on the location of the colony. Thus, Kolkata's slums should be called low income colonies and need special attention for its development.

This paper is based on primary data collected from a feild survey, conducted during September to December 2011, 500 families have been interviewed (100 from each site, 50 from slums and 50 from non-slum low income housing). Statistical techniques are used to analyse the data.

The main findings are showing that people living in the extreme east and west of the city are more deprived than other sites in term of economic indicators and infrastructure and ammenities. Slum dwellers living in other parts of the city are economically well off, but can not afford to have proper housing within the core city.

89-1

Out-of-Pocket-Expenditure for Family on Normal Vaginal and Caesarean-Section Deliveries and Influence of Janani Suraksha Yojana Program on Delivery Associated Borrowings in the States/Union Territories of India

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High 'out-of-pocket expenditure' (OOPE) on family was the main deterrent to seeking skilled/institutional delivery care, and poor families are particularly vulnerable when these expenditures exceed their capacity to pay. In 2005, Government of India launched Janani Suraksha Yojana (JSY) Program - a conditional cash transfer program to promote institutional deliveries among the poor.

Objectives:

- To estimate the OOPE on family according to type (normal/caesarean-section) and place (home/government hospital/private hospital) of delivery, in the states/union territories of India;
- To examine inter-state differences among those JSY beneficiaries who had to borrow money/sell property to meet the delivery costs;
- To outline the socio-economic and demographic profile of families according to OOPE on normal/caesarean-section deliveries.

Used District Level Household Survey (DLHS-3) births/deliveries between January 2007 and December 2008. The OOPE on family for delivery was estimated, not only in terms of mean & standard deviation (SD), but also by median & intra-quartile-range (IQR).

Of all the deliveries in India (N=83,510), 90% were 'normal', 8% 'c-section', and 2% 'instrument/assisted'. For a normal delivery, first quarter of women spent Rs. ≤150; second quarter spent Rs.150-500; third quarter spent Rs. 500-1,500; and last quarter spent Rs. >1,500 - with a mean of Rs. 1,338 (SD=2705). More than half of (57%) normal deliveries occurred at home, 29% at government and 14% at private hospitals, with respective mean OOPEs of Rs. 466 (SD=972), Rs. 1,624 (SD=2273) and Rs. 4,458 (SD=5070). Normal deliveries were costlier in low-focus-states as compared to high-focus-states. JSY out-reach was around 50% for normal deliveries at government hospitals in high-focus-states and 29-39% among them borrowed money/sold property to meet delivery expenses.

A quarter of the deliveries in five southern states and Goa were c-sections, while <10% in rest of India. In India, mean OOPE on a c-section in a private hospital was three times [Rs. 14,276 (SD=9639)] the government [Rs. 5,935 (SD=6859)]. Huge OOPE on c-sections forced 40-50% families to borrow money/sell property, with no/minimal JSY out-reach. With increase in literacy and economic status, average OOPE of a normal/c-section delivery increased, while JSY utilization dropped.

Although differentials in OOPEs on delivery were broadly on expected lines, the differences are not as large as expected. Variations in OOPE on delivery care by economic classes are not matching with the variations in real income levels, resulting in high relative burden on poorer classes than on middle/higher income classes. Similarly, inter-state differences OOPEs are not as large as the differences in per capita SDPs, with high relative burden on poor states. Family burden of delivery care is low and utilization of JSY was high in the states where there are state-specific initiatives for improving maternal health.

89-2

Assessment of Social Schemes among Vulnerable Population in two Districts of MP, India

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Social security schemes and conditional cash transfers have become popular government strategies to reduce poverty and inequity. However, one of the major concerns with such strategies is leakage and poor reach to the intended. One main approach applied to monitor these schemes is beneficiary assessment. Such assessments require much detailed enquiry to understand the accessibility of various schemes, on patterns of capture and other dynamics around participation, role and responsiveness of local official/body, and other bottlenecks at the community level. This particular study gives insight into the ground realities related to these schemes from the beneficiaries' perspective.

Data for the study comes from an assessment conducted in two districts of MP among 150 vulnerable households. This sample was obtained through a three-stage sampling design from a list of about 2200 beneficiaries created by community based targeting focused mainly on primitive tribal population. Face to face surveys were conducted to understand the awareness and knowledge of different government schemes; and the problems faced in accessing or reasons for not accessing. Some of the schemes focused are NREGA, JSY, LLY, PDS, ICDS, School scholarships, Old age pension and Widow Pension schemes (flagship programs of Indian government). Descriptive methods are used to further assess the situation.

Only 59% of the respondents have heard about NREGA and of these, not more than 4% have comprehensive knowledge about the scheme. On the other hand, 83% of the respondents have heard about JSY but not more than 27% have comprehensive knowledge of the scheme. The main bottlenecks in reaching beneficiaries are poor awareness and knowledge about schemes, high opportunity costs, corruption at local level, a disinclination to change the status-quo at the community level, and either a bleak or a cynically indifferent attitude towards availing benefits.

Reach of social schemes is poor among the most vulnerable, a population that is the main target of social schemes. As such, measures to improve awareness and increase knowledge are essential along with rigorous monitoring of scheme implementation, specially at the local level. Also, for very disadvantaged populations or geographical areas with very poor indicators, initiatives should be undertaken to complete necessary formalities at the beneficiary door-step.

89-3

An Inquiry of Poverty Dynamics in Indonesia: Movement, Rural-Urban Poverty Interaction and It's Related Poverty Alleviation Policies Perspectives 2008-2010

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Indonesia has made significant progress in poverty reduction, a key MDG target, with the poverty rate being halved in the years since the Asian Financial Crisis. However, the reduction in the national poverty rate over time does not account for the large proportion of vulnerable households who remain just above the poverty line, and hides the dynamics of poverty at the household level, with some households exiting poverty, others falling into poverty, and in the case of the chronic poor, some remain in poverty for a number of years. This paper presents a deeper understanding of the recent dynamics of poverty in Indonesia, using the panel data of SUSENAS (Sosio-Economic Survey) 2008-2010.The data show that around half of all poor households in each year were not poor the year before; that is, they are newly poor. At the same time, of the average poverty rate over the three year period (15 percent), only around one quarter is due to chronically poor households (always poor over this period). These results emphasize the highly fluid nature of poverty in Indonesia, with high rates of entry and exit, and the need for effective social assistance to protect households from falling into poverty and thus accelerating poverty reduction.

The movement of poverty is empirically estimated using a multinomial logit model which examines various household characteristics and location effect. The results show how thesecharacteristics affect household's relationship to poverty.The paper also examines thedynamics inside poverty described by the interaction of urban and rural poverty, providing timely information for determining long-term policies.

89-4

Can Health Insurance Be a Viable Solution to Reduce Inequality in Health Care Utilization in Rural India

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In recent times, there has been a growing concern with the increasing cost of treatment and existing mechanisms to reduce inequality in access to health care services. Although, international studies have investigated impact of health insurance on health care utilization, there is dearth of research in India. People's awareness and perception about health insurance schemes might help in proper designing and greater coverage of health insurance schemes.

The paper (a) examines the impact of social health insurance on health care utilization and examines the effectiveness of health insurance to protect households against financial catastrophe, and (b) assess people's awareness, willingness and ability to pay for community based health insurance schemes.

The paper utilizes secondary dataset of World Health Survey (2003) and National Family Health Survey-3 (2005-06), and dataset of a primary survey (2007) conducted in two districts of West Bengal. The paper deals with Employees State Insurance Scheme (ESIS), a social health insurance and which is one of the major flagships of the health insurance schemes directly run by the Government. Primary data was collected using a two-stage stratified random sampling procedure from 400 rural households. To empirically assess the impact of scheme membership on health care utilization and financial protection, a two-part model has been used and the incidence and intensity of catastrophic health care costs has been measured. The second objective has been tackled with the help of contingent valuation method.

Insurance coverage is very low in India and especially among the people of lower income quintiles. Results demonstrate that 36 percent of the insured sampled households recorded out-of-payments in excess of 10 percent of their pre-payment income and 50 percent of uninsured sampled households had to make such payment. At lower thresholds, the incidence of ‘catastrophic' health costs was more concentrated among the poor and at higher thresholds it was more concentrated among the rich. The two-part model indicates that households with any health insurance scheme tend to utilize health care services more compared to those without any health insurance. However, merely one-fourth of respondents were aware of any health insurance scheme. About 65 percent respondents felt need for any health insurance for themselves and 47 percent felt the need for other members of the household. Most of them (87 percent) thought that such scheme might support for high treatment cost. Among the willing respondents, 50 percent preferred community based health insurance scheme over other types of schemes. Finally, the paper recommends few mechanisms how best the health care services can be offered to the poorer people and that may work out as an alternative or supporting option to get rid of the threat of catastrophic health payments and debt-trap.

89-5

Demography, Development and Social Conflict in Asia and the Pacific: Case Studies from Timor-Leste and Bougainville

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As the world is going to add another near 2.5 billion population by 2075 and as majority of these additions will be from developing countries with a proportion of very high young population, it raises the concern that in future the destabilising effects of demographic changes could have a profound impact not only on national security but also global security. The United Nations Population Fund (UNFPA) has noted the implications that rapid population growth may have for global security is most alarming; however it still remains as an unfamiliar feature in analyses of current and recent conflicts. In a recent report UNFPA mentions that societies currently in conflict or in post conflict transition, are facing a demographic challenge of extremely high proportion of young population and it predicts that a youth bulge, created by continuing high fertility in the past would be a source of unrest and conflict if adequate educational and employment facilities are not available.

Based on the combination of primary and secondary data (primary data collected between 2006 and 2008) this paper provides an analysis of the impact of the current and projected structure and growth of population on human security and stabilisation in two specific regions in Asia and the Pacific - Timor-Leste and Bougainville. Both these regions have recently experienced very similar political transition after a long conflict leading to the birth of new nation (Timor-Leste) and the emergence of political autonomy (Bougainville). However the nation-building process of these regions is currently facing new demographic challenges contributing to re-emergence of social conflict. For example in case of Timor-Leste amidst the worrying socio-economic condition in this new nation, it is of great concern as this research shows that the population of Timor-Leste will double within next two decades. The findings of this research clearly indicate that the rapid growth of a young adult population unable to find employment and other meaningful opportunities have contributed to ongoing unrest leading to violent social conflict. These regions characterised by high fertility rates, low formal sector employment and very limited migration options, have already generated the extremely high proportions of excess labour which is likely to continue. The findings of this paper also warn that although there will be increase in domestic employment opportunities, it would still leave 90 percent of the populations of these countries outside the formal sector. However on a positive note this paper concludes that these regions have a strong opportunity to achieve demographic dividend through adequate investment on human capital in their early stage of demographic transition - the dividend that played a vital role in the "economic miracles" of the East Asian Tigers. This implies a healthy, knowledgeable population, as well as jobs.

90-1

Intrastate Socio Economic Inequality and Inter Dependency between Human Development and Economic Development in India: A District Level Study

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India in the last five years has shown a GDP growth rate of more than 8 percent which can be said to be satisfactory as far as the Economic Development (ED) is concerned. But, whether this high rate of economic growth has really translated into high Human Development (HD), is a big question. There are concerns that regional inequality in India has increased after the economic reforms of 1991. This concern is supported by various statistical analyses. In the light of these facts this paper tries to look at the nature of inter dependency between human development and economic development at both state level as well as district level. We have also tried disparities in detail and have tried to find out how these inequalities are explaining the gaps between human Development and Economic Development. Our study in based on three levels (1) national level, taking districts as a unit of study, (2) state level and (3) intra state inequalities, again taking district as a unit of study.

The analysis was done using data from Census 2001,Central Statistical Organisation, National Sample Survey Organisation, National Family Health Survey, Annual Survey of Industries, International Institute of Population Sciences Report , Indian Public finance Statistics for year 1990-91, 2000-01 and 2005-06.

To look at the position of HD and ED and its relationship with various socioeconomic factors we have use the **Modified PCA** to construct various composite indices of HD, ED, Public Expenditure and Intra State Inequality at state level. For district level analysis the 467 district human development index (DHDI) has been calculated for all the districts of 17 major states of India for year 2000-01 using UNDP method. In this paper attempt has been make to estimate the per capita district income which is widely comparable.

In this paper the underlying claim is that the Human Development and Economic Development exhibit low correlation. It is further concluded that economic development leads to human development via public expenditure. The major finding of the thesis is that in India in the recent past, Economic Development has not translated well into Human Development. The increase in human development in India in the recent past is basically due to increase in public expenditure. It is said that the weak inter dependencies between Human Development and Economic Development poses a question on the long run sustainability on both Human Development and Economic Development. Therefore it is been suggested to follow the policy of inclusive growth and a region specific and flexible approach of development planning.

90-2

Unemployment and Levels of Socio-economic Deprivation in India: A Regional Perspective

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The study has been taken up to examine the spatial patterns of unemployment rate, variations in the levels of socio-economic deprivation and causal relationship between unemployment (dependent variable) and selected variables of socio-economic deprivation (independent variables) among the twenty eight states and seven union territories of India. The entire research work is based on secondary sources of data, collected from Census of India publications, New Delhi for the year 2001. The boundary of the state/union territory has been taken as the unit of the study.

The state/union territory wise data of unemployment and socio-economic indicators of deprivation were calculated and statistically analysed by using the statistical methods i.e., Z-score for standardising the data into standard score, Composite Z-score (CS) for summing up Z-score values state/union territory wise, Karl Pearson's correlation co-efficient (r) to find out correlation between the unemployment (dependent variable) and indicators of socio-economic deprivation (independent variables) and student t-test technique to test the significance level between them. Besides, advanced statistical techniques, SPSS (Version 16.00) & R (Version 2.12.2) software to analyse the statistical data and GIS-Arc view programme (Version 3.2a) to show the spatial patterns of unemployment, and levels of socio-economic deprivation among the states of India through figures have been applied in the study.

The analysis of the present study discloses that the level of unemployment relatively increases from south towards the northern parts and from east towards the western parts of the country. The level of socio-economic deprivation is high in the north-central states, and it decreases towards the north, south, east and north-eastern parts into medium level of socio-economic deprivation in the country. The t-test explicates that spatial variations in the level of unemployment might have been mainly due to rural unemployment rate, household size and population density, etc. in the country.

90-3

Incidence of Poverty and Level of Socio-economic Deprivation in India

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In the present paper an attempt has been made to analyse the inter-state variations in the incidence of poverty and level of deprivation. The causal relationship between poverty rate (dependent variable) and selected socio-economic variables (independent variables) has been also taken into account. The entire research work is based on secondary sources of data, collected from Statistical Reports, 2006, Sample Registration System Bulletins, 2008 and other Census publications (2001), New Delhi. The state/union territory has been taken as the smallest unit of study.

The state and union territory-wise data of poverty and socio-economic variables, were calculated and statistically analysed by using the statistical methods viz., deprivation method to assess the deprivation level, Karl Pearson's correlation co-efficient (r) method to find out the correlation between poverty rate (dependent variable) and socio-economic variables (independent variables), and student t-test technique to test the significance level between them. Besides, advanced statistical techniques, GIS-Arc view programme (Version 3.2a) has been adopted to represent the regional variations in the level of poverty and its determinants among the states and union territories of India through maps.

90-4

Poverty and Deprivation Level in Rural India: A Disaggregated Analysis

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Notwithstanding India's robust economic performance since the economic reforms in early 1990's, significant deficits in human development parameters, most notably in health and nutrition standards, remain a cause of concern. The rising gap between official head-count ratio and share of population having less than minimum calorie intake that formed the basis of official poverty line have been a matter of wide public concern and debate. This debate surrounds over the method of measurement and it is complex and still inconclusive. The studies so far deal poverty at India and rural-urban level and there is dearth of them which may show vulnerable sections of the society and the areas where both poverty and under-nutrition level is high. The present paper aims to show calorie deprivation and poverty in rural areas using both methods of poverty measurement at disaggregated level. Besides, it also highlights change in level of nutrients across different sections and regions of the society and also places emphasis on level of deficiency of different nutrients from the recommended dietary allowances (RDA) which may help in identifying the vulnerable sections and regions in terms of calorie and protein intake. An analysis at interstate level is performed which tries to find out downtrodden regions of rural India. A probability of being calorie deprived among groups and regions is also discussed.

90-5

Intra-Urban Disparities in Childhood Stunting in Three South Asian Countries

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In the developing world, an estimated one third (195 million) of children less than five years are stunted, meaning being too short for ones age. Forty percent of these stunted children live in six South Asian countries namely India, Pakistan, Bangladesh, Afghanistan, Myanmar and Nepal. India alone houses 31% of developing world's stunted children. Stunting reflects long-term and cumulative effects of inadequate food intake and poor health conditions that result from extreme poverty. Poorest and marginalized have higher levels of stunting. The urban poor represent one such marginalized group whose deprivation gets camouflaged in the grandeur of the cities and urban-rural comparisons. While country-level Demographic Health Survey (DHS) provides adequate sample to unravel disparities among economic segments in urban areas based on wealth-index used by DHS, often intra-urban comparisons are not made or used. More worrisome is that while in the six countries insufficient or no progress has been made to achieve MDG-1, DHS Nutrition Data is available only for India, Bangladesh and Nepal.

For the latter three countries, the recent DHS stunting data for the urban sub-set was analyzed by quartile-wise for India/Bangladesh and decile-wise for Nepal considering one-quarter of urban population of India/Bangladesh and one-tenth of urban population of Nepal reside in poverty as per official poverty estimates. Poorest was considered as the lowest quartile for India/Bangladesh and bottom-two decile of Nepal. Richest was considered as the top quartile for India/Bangladesh and Top-two decile of Nepal.

India, Bangladesh and Nepal together are home to 10.6 million urban poor children less than five years. Of these, 5.8 million children were stunted (height for age less than 2 SD of WHO growth standards) and nearly 3 million were severely stunted (height for age less than 3SD of WHO growth standards). Significant disparities in stunting were seen between the rich and poor children. Compared to the richest children – (i) stunting was 2-3 times higher in poorest in the three countries and (ii) severe stunting was 3-4 times higher in poor of India and Nepal & 9 times higher in urban poor children of Bangladesh. Stunting in quartile/decile next to the poorest was also high at 40-50%.

The study findings reveal (i) an urgent need for collecting nutrition data in countries where it is not collected and using disaggregating urban data for addressing high-levels of stunting in urban poor and (ii) equating equal focus to address stunting in quartile/deciles next to lowest. (Key words: Stunting, disparities, urban poor)

91-1

The Linkages between Migration and Poverty in India: A Comparative Study of Vulnerability between Migrants and Non-Migrant Households

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The relationship between migration and poverty has been extensively investigated in the literature, and yet it is difficult to speak of generally accepted conclusion on the matter. Massey et al. (1993) review the major theories of migration, and in each of them elements to link poverty and migration can be traced.

It is against this backdrop that this paper provides an explanation by examining 64th Round of National Sample Survey (NSS) data for evidence of whether there are linkages between food security and migration status and migration types in India. Expenditures are useful as a proxy for wider purchasing power, which is an important component of food access, which in turn, again a significant explanatory component of food security at household level.

Objectives:

1) To find out the differentials in households monthly expenditure on food items by migrant-households by types and non-migrant households.
2) To examine the association between migration and food security by classifying different migrant and non-migrant households on the basis of food insecurity related vulnerability indicators.
3) To examine the association between migration and food security by studying the effect of migration types on food access after controlling for different socio-demographic factors.

Data have been utilized from the 64th round of National Sample Survey, conducted during July, 2007 to June, 2008.

The differentials in expenditure by migrant and non-migrant households have been studied with average monthly per capita expenditure, average per capita expenditure on food and non-food items, share of food expenditure to household total monthly expenditure and food diversity. To classify households with different migrant and non-migrant status on the basis of six vulnerability indicators, k-means cluster analysis have been carried out. The goal of a cluster analysis is to find an optimal grouping for which the observations or objects within each cluster are similar, but are dissimilar to the objects in other clusters. To examine the net effect of migration types on food access, multiple classification analysis (MCA) has been carried out.

This paper throws light on much debated topic on the relationship between food security and migration. Findings reveal that there are three distinct groups within migration-status in terms of vulnerability. In general, migrant households are better-off than non-migrant households. But households which relocated because of forced migration faced the maximum vulnerability regarding food security.

If we restrict our comparison of non-migrant households with other migrant households (excluding forced migrants), then vulnerability of non-migrant households in terms of food security can easily be compared and assessed. When non-migrant households are identified as least food secured; a clear look at within migrant households reveal that not all migrant households are equally food secured.

91-2

Measures, Levels and Determinants of Household Food Insecurity and Nutritional Status in Urban India: A Study of Disparity and Vulnerability

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Approximately 28.0 per cent of the population lives in urban areas; though, in absolute terms, this population of 290 million people does not uniformly share the benefits of urbanization that the top decile of the population enjoys. As urban food insecurity is a complex in nature, it depends on not only buying capacities of urban denizens, but also takes account of demographic compositions of household, hygienic living conditions, education and less gender discriminations in and outside urban households.

Objectives:

1) To provide a framework of examining urban food insecurity in India at state level in perspectives of different dimensions of food insecurity: affordability, human capital, housing, environmental health, gender dimension and existing levels of health status.
2) To measure urban food insecurity in India at state level by developing an overall urban food insecurity index.
3) To measure household food insecurity and nutritional status of women and children in urban India.
4) To study the levels of urban household food insecurity and nutritional status by different demographic and socio-economic factors.
5) To examine the role of demographic factors, socio-economic factors (including human capital and household characteristics) on the levels of urban household food insecurity and nutritional status of women.

Data have been obtained from National Sample Survey Organization-61st Round (2004-05) and 64th Round (2007-08) and National Family Health Survey-3 (2005-06).
For state level perspective, the Overall Urban Food Insecurity Index has been developed on the basis of six dimensions of urban food insecurity - affordability, human capital, housing, environmental health, gender dimension and existing levels of health status. Six separate indices have been created to study these dimensions. Urban household food insecurity has been measured by dietary diversity, food consumption score, and food intake data (recall method), per capita total expenditure on food items. Body mass index has been taken as nutritional status of women. Demographic (age and sex of the household head, household size etc), household characteristics (crowding index, sanitation etc) and human capital (education, occupation etc) will be taken as the explanatory variables. Statistical analyses like chi-square, ANOVA, correlation, multiple linear regressions, PCA, binary and multiple logistic regressions have been carried out to fulfill these objectives.

Finding reveals that though the urban food insecurity is severe in urban India, its level varies from one state to another state. Results show that household characteristics (size of the household, child-headed household or elderly-headed households, sanitation and health index), demographic indictors (age-sex structures, dependency ratio, migration status), human capital (education) have significant effects on urban household food insecurity and nutritional status. Some of the policy implications emerged from this study point out towards formation of human capital and problems related to environmental health in urban areas.

91-3

Household Characteristics and Patterns of Food Expenditure in Ghana

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The main objective of the Successive governments in Ghana is to reduce poverty and to enhance the wellbeing of the general population. Household consumption which is generally measured by expenditure is however fundamental to this general objective. It is therefore absolutely important that patterns of household expenditure be explored in order to increase our understanding of household expenditure. This study uses household level data (GLSS 5) collected by the Ghana statistical service in 2005/2006 to examine factors that relate to household patterns of expenditure in Ghana. The study shows that household expenditure defined by expenditure share on food is strongly associated with sex of household head, educational attainment, household size, welfare quintile, marital status, administrative region of residence and place of residence. At the bivariate stage one-way Anova was used in exploring the relationship between the share of household expenditure devoted to food, there was a statistically significant relationship between all the household characteristics and the dependent variable.For each of the independent variables, one was chosen as the reference category for the multivariate analysis. Simple linear regression was used in analyzing the relationship between household characteristics and share of household expenditure devoted to food.The overall analysis showed that all the independent variables were strongly associated with share of household expenditure devoted to food, but with the exception of education, which is quite surprising because the literature on education suggest that education was a strong determinant of poverty.

91-4

Migration and Food Consumption Patterns: Evidences from India

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Internal migration is an important phenomenon in developing countries. The role of migration in the context of rural development, labour market, livelihood strategy as well as an instrument for upward mobility is studied at length in the relevant literature. Studying the impact of migration on food consumption as well as nutritional intake of individuals is comparatively a new strand of literature both from consumption behaviour, and migration studies point of view. It is generally observed that the main reason behind migration is to get better job opportunities and wages at the destination, which translate into remittances to their families. On the one hand, remittances support livelihood and help households to come out of poverty traps; on the other hand, they ensure food security and minimum food intake to the household members. This paper aims to analyze the impact of migration on food consumption as well as on nutritional intake of individuals as well as households with out-migrants. Using the NSSO survey 2007-08 (64^{th} round) on migration in India, we find that households with out-migrants have average monthly consumption expenditure (MCE) of Rs. 4796 and households with no out-migrants have average MCE of Rs. 4107. We observe that on average, households with out-migrants have higher MCE on all food items (Cereals, pulses and pulse products, milk and milk products, edible oil etc., vegetables, fruits and nuts, and meat, eggs and fish) as compared to those with no out-migrants. This suggests that migration is an important determinant of food consumption pattern. We will consider the impact of short term and permanent (long term) migration on food consumption behavior separately, because the motives and economic conditions of both types of migrants are inherently different. We will use Instrumental variable (IV) approach, to correct for self selection bias in migration decision. We also intend to calculate Shannon and Simpson diversity index proposed in the literature to measure the diversity in food consumption behavior (Nguyen and Winters, 2011).

91-5

Mental Health, Happiness, and Income

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This paper utilizes data from the Development and Testing of Thai Mental Health Indicator Version 2007 to study the mental health and happiness of the Thai people. Given that subjective well-being is a valid measure of mental well-being and that subjective well-being is cardinally measurable and interpersonally comparable, we estimated life satisfaction and happiness level using various socio-demographic and socioeconomic determinants. Due to the fact that income, in theory, can be influenced by mental health, we test for the effects of mental health on income. As expected, we find that income is significantly affected by life satisfaction and happiness. As a result, income is instrumented using mean income by area and occupation as an exclusion restriction. The results on the IV estimation suggest that income has no effect on life satisfaction while having a statistically significant effect on happiness. Similarly, we find that gender has no effect on being satisfied with life but find a statistically significant effect of gender on happiness. The results on marital status suggest that people who are single are as happy as but are less satisfied with life than those who are married. Being divorced or widowed, however, reduces happiness.

Another important finding is that the effects of some mental health determinants may significantly change after controlling for endogeneity of income. For example, we find that the endogeneity of income biases the effects of education and marital status on life satisfaction downwards. The true effects of education and marital status are much greater in our IV estimations than in our OLS estimations.

91-6

Population, Poverty, and Sustainable Development: A Review of the Evidence

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We review the evidence from a large literature, on three questions: (a) Does high fertility affect low-income countries' prospects of economic growth and poverty reduction? (b) Does population growth exacerbate pressure on natural resources? and (c) Can family planning programs help lower fertility?

The consensus is that policy settings are key in shaping economic prospects, but the pace of population growth also matters. Recent studies find that fertility decline facilitates economic growth and poverty reduction in low-income settings. It is also associated with improved schooling and health.

Population growth also exacerbates pressure on environmental common property resources. There are deep challenges to aligning divergent interests for managing these resources. However, part of the pressure on these resources can be mitigated by fertility decline.

Studies find family planning programs can help lower fertility. They might help especially in sub-Saharan Africa, where high fertility and policy constraints slow rise in living standards.

92-1

Status of Aged Women and Their Living Arrangements in Kamrup District of Assam

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The condition of old women vis-à-vis their male counterparts are relatively abject. The fact that physically females are weaker than the male species renders them more vulnerable to the pangs of old age. This coupled with the fact that the existing social structure provides very little for their existence after a certain point. Widowhood is generally found to lower the socio-economic level of women. Older women are either illiterate or poorly educated. Their work as home-makers and care givers is never monetized. Nor are they likely to hold property exclusively in their names. All this contributes to women's total dependency on the family for mere survival.

The hitherto traditional Indian family structure used to provide the required environment for comfortable living of the elderly. Until recently the extended family usually constituted of two generations living together wherein the elderly had a privileged status in the household. However in recent years with a rising number of nuclear families, the elderly seems to have been deprived of certain needs which are not adaptable for them. With the increasing participation of women in the labour force, many women bear the multiple burden of caring for the household, the elderly, their careers and themselves. Thus, there is potential for conflict in many situations where gender-based attitudes and behaviours are undergoing change.

The present study has been conducted to analyze and evaluate the living arrangements of the female elderly in the city of Guwahati and the rural areas of Kamrup district of Assam. The focus is on the female aged because it is felt that the plight of the female elderly merits the maximum attention. The primary objective of the study is to delineate a profile of the aged women (60+) in Guwahati city and rural parts of Kamrup District of Assam and to explore their living arrangements. in terms of the family type in which the elderly live, the type of compatibility they maintain with the other family members and the extent to which they adjust to changes. The study is exploratory in nature and both primary and secondary sources of information have been used. The primary data has been collected by conducting a field survey of 200 aged women respondents from Guwahati city and rural parts of Kamrup District and by visiting an old age home and a day care house. The respondents were selected on a non random basis by using snow ball method of sampling and data was collected with the help of a ‘pre-tested designed questionnaire'. Focus group interview has been conducted with the residents of old age home and a separate analysis has been done in addition to the total sample size of 200 respondents.

92-2

Family Support of Elderly Females: The Impacts of Internal Migration and Changing Household Composition on Support Networks in Vietnam

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Family support for the elderly in Vietnam, like many Asian nations, remains a central mechanism for the care of this growing population. Similarly, Vietnam shares the growing concerns associated the increased flows of rural to urban migration that can strip rural communities of working aged adults; typically the backbone of family support networks. In many Asian nations, these migration flows leave elderly in rural areas with a reduced pool of potential caregivers while often placing increased burdens on the elders as grandchildren often remain in family home when parents migrate for work.

This paper present preliminary research on the change in household structure that contain aged females in Vietnam using data from the 1989 and 1999 and 2009 Census of population. While considerable work has been done in Vietnam on reproductive behavior and family, little has been done quantitatively to date on the lives of the aged. This paper examines how household support systems have changed in urban and rural areas as a response to internal migration, particularly during the "Doi Moi" period of economic reforms. The paper shows that there have been marked transitions in the composition of households that contained aged Vietnamese females but that they continue to live within an extended household system. These changes do suggest, however, that Vietnamese women are facing new challenges in the structure of their coresident support networks that may have negative impacts if trends follow that seen for other Asian and Pacific nations.

92-3

Effect of Thai Living Household Environment on the Elderly Falling-Experience

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The household environment has been acknowledged as one of the basis factors influencing health of the elderly and their ability to "age in place". This study aims to identify the household environmental conditions with respect to household environmental hazards and living arrangement which could cause falls among the elderly in Thai context. The most recent data from a national survey among the elderly in Thailand conducted by the National Statistical Office in 2007 was used. In the survey, the information on history of falls, living household environment, and other possible associated risk factors of falls were collected in 30,427 samples who were 60 years-old or older. Association between experience of falls and the explanatory variables were assessed using bivariate analysis. Variables were then re-examined in multivariate analysis to assess the net effect of the living household environment on experience of falls after controlling for other variables. The results from logistic regression show that the household environment plays a major role in the occurrence of falls in the elderly after controlling other variables, such as health status, health behavior, and sociodemographic characteristics. The household hazard conditions which were found to increase chance of experiencing falls were slippery floor surface in first storey of house (OR 1.39; 95% CI 1.21-1.59, p =0.000), slippery floor surface in bathroom or toilet (OR 1.32; 95%CI 1.16-1.49, p=0.000)**,** and bathroom or toilet located outside house (OR 1.23; 95%CI 1.12-1.35, p=0.000). Furthermore, the elderly who lived with spouse had a 32% lower chance (OR 0.68 95%CI 0.59-0.78, p=0.000) of experiencing falls than did those who lived alone in house. The findings suggest the need to consider the household environmental factors when planning and implementing falls-prevention intervention. In Thai context, not only traditional interventions, such as health education and exercise, but modifications of home hazards related to floor surface and location of bathroom or toilet are suggested to be beneficial in preventing falls. Besides, the results seem to reflect the integral role of informal support particularly from spouse in preventing falls.

92-4

Relationship between Cognitive Test Performance and Self Rated Psychological Symptoms of the Elderly Across Demographically Diverse States in India

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An attempt has been made in this paper to discuss the association between cognitive test performance, based on Hindi Mini-Mental State Examination (HMMSE), and various self rated psychological symptoms among elderly people in Uttar Pradesh and Kerala States of India. Any study in these two states Uttar Pradesh (UP) and Kerala gives a true picture of India's profiles related to elderly population in all most all respects. The results based on these two Indian States can be compared with the results of any developed and developing country of Asian region. In Kerala, one fourth of the state's population will be expected to turn 60 by 2050. On the other hand, in Uttar Pradesh, the ratio of elderly population is expected to grow more slowly, with the estimated percentage at the mid-21st century at less than half of that of Kerala, but in absolute numbers, it is likely to be more than Kerala. These two Indian states one in South and another in North have different socio-economic, demographic and cultural characteristics. Demographically, Uttar Pradesh, a most populous state of the country has highest demographic measures (viz. birth rate (28.7) and death rate (8.2); SRS-2011), low per capita income and high rate of illiteracy (about 30 per cent; Census, 2011), while Kerala with about 94 per cent (Census-2011) literacy rate has going beyond the replacement fertility rate (birth rate-14.7 and death rate-6.8); SRS-2011). Mean number of persons per room in UP's households is about 3.0, whereas in Kerala it is 1.3 (NFHS-3).This may shows that proportion of shared households are more in UP as compared to Kerala. Thus elderly of these two states possesses different profiles and may have different socio-economic problems. There is no data available on the above mentioned aspects in Indian Census or National Family Health Surveys or Sample Registration Systems of the country. Thus, this study is based on a specially designed sample survey entitled "*Socio-Economic Status, Behavioral Problems and Health Hazards of The Elderly Across Diverse Setting in India-2010*" of about 1000 elderly people taken from the above two states comprising 600 elderly people from UP and 400 from Kerala. The data has been collected both at macro level (i.e. at the levels of household and society), and at the micro level (i.e. at the individual level-elderly person concerned). In present study, the median score based on HMMSE was found less among the elderly sample in Kerala as compared to UP. The low scoring in HMMSE was found significantly associated with higher age and low educational level of the elderly. However, the symptoms of sadness, depressive thoughts, social withdrawal and agitation feeling were also found to be significantly related with the HMMSE scores.

92-5

The Effect of Coresidence with an Adult Child on Depressive Symptoms among Older Widowed Women in South Korea: An Instrumental Variables Estimation

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To estimate the causal effect of coresidence with an adult child on depressive symptoms among older widowed women in South Korea.

Data from the first (2006) and second (2008) waves of the Korea Longitudinal Study of Ageing were used. The analysis was restricted to widowed women aged ≥ 65 years with at least one living child (N=2,446). We used an instrumental variables estimation exploiting two child characteristics as instrumental variables (the number of sons and whether the eldest child is a daughter). Specification tests for instrumental variables showed that these instruments predict the probability of an elderly woman's coresidence with an adult child but do not directly affect depressive symptoms.

Our instrumental variables two-stage least squares estimator suggested that coresidence with an adult child has a protective effect on depressive symptoms among older widowed women in South Korea. Coresidence was found to be endogenous in our statistical model of depressive symptoms.

The instrumental variables estimation method can be a useful approach to addressing the potential endogeneity between intergenerational coresidence and elderly health. Rapidly decreasing rates of intergenerational coresidence may raise public health concerns among older widowed women in South Korea.

93-1

Is India Heading towards Secured Old Age?

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As India addresses the challenges of 21st century and manages its rise globally, constructing and implementing a modern social security system represents one of its major imperatives. Traditionally the responsibility of elderly is borne by the immediate family and their social security was not a subject of concern. However, with a trend towards nuclear family, their vulnerability is increasing and efforts are required to ensure their social security.

The objective of the study is to critically assess the old age security plans and reforms for senior citizens in India

This study is based on the critical review of various pension and old age security plans of the government. The study has employed Meta analysis which employs systematic review of literature.

There are several reforms and plans like Civil Servants' Pension, Employee Provident Fund etc that government has initiated to ensure a secure and safe old age for its senior citizens but results suggest that these are just the handful of reforms not enough to ensure the economic security for its elderly. The reforms and plans are largely covering the working population and out of this slot only those working in government sector are entitled for pension. Thus a large proportion of the elderly population is uncovered and is dependent on their past savings. On the other hand improvement in healthcare facilities leading to increase in life expectancy, evolution of nuclear family systems and rising expectations due to increase in per capita income, education etc. are some of the factors that are likely to compound the problem of ensuring safe and secure old age in future.

Pensions is one of the largest components of government expenditures and is likely to increase in the future which will not be sustainable in long run. India has one of the world's highest savings rates and so workers should be encouraged to contribute towards a self financed old age income security within their abilities as India's pension policy has primarily and traditionally been based on financing through employer and employee participation. As a result, the coverage has been restricted to the organized sector and a vast majority of workforce in the unorganized sector has been denied access to formal channels of old age financial support.

93-2

Does Economic Status Affect the Psychological Wellbeing and Quality of Life of Elderly in India? New Evidences from a Household Survey.

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India has the second largest elderly population in the world and the elderly proportion in the country is constantly growing. The shift from joint families to nuclear families has led to loss of support and care for elderly. The elderly population in the country has received very little attention and only few research have been done on their psychological wellbeing and quality of life. Using the World Health Organization sponsored Study on Global Ageing and Adult Health (WHO-SAGE) in India (2007), this paper tries to understand the effects of economic status on psychological wellbeing and quality of life of aged. The study utilises data from 6560 persons aged 50 years and above from six states of India. Wealth quintile was used as a proxy indicator for economic status of the respondents. Logistic regression models have been used to understand the relationship of economic status to psychological wellbeing and quality of life. The scale reliability coefficient (Cronbach's alpha) for psychological wellbeing and quality of life is 0.84 and 0.87 respectively. Based on eight questions covering domains of personal and social wellbeing of individuals, WHOQOL score has been generated, which varies from 0 to 100. Three models of bivariate logistic regression give the net effect of economic status on quality of life. Unadjusted association between economic status and quality of life shows that with the increase in economic status the degree of association also increases. After adjusting all the socio-demographic factors, association between economic status and quality of life remains unaffected. Quality of life, measured in terms of WHOQOL, were found to be lower in the logistic regression analysis, for respondents who are poor, women, older and those who are single. While family structure, age, sex and education play a role in the quality of life of elderly, economic status has very strong relation to the quality of life. Social security and economic assistance in the form of pensions and other benefits can help the elderly in improving the overall quality of life. The odd ratio for quality of life was 6.244 for the richest group. Women reported poorer psychological wellbeing compared to their counterparts. As age increases, the quality of life and psychological wellbeing decreases for both men and women. The study shows that there exists problems of inequality in psychological wellbeing and quality of life of elderly in India. The economic status of households assumes great relevance in the context of lack of social security measures for majority of the aged in India.

93-3

Factors Related with Mental Health of Thai Elderly : National Health Examination Survey Round 3 (2003-2004)

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Dementia is the major mental health problem in elderly. This study determines the associated factors that have effect with the screening test of dementia by using data from the National Health Examination Survey (NHES) round 3 (2003-2004) that used Thai Mental State Examination (TMSE) for screening dementia.

The elderly that were sample of this study is 19,372 (9,419 males and 9,953 females), age between 60 years to 99 years (mean = 69 years). Most of elderly were Buddism (97%), married (63.6%), and had elementary education level (73.2%). 71.1 percent of Thai elderly had their own income but 3 of 4 had monthly income lower 5,000 baht and also had family income lower 10,000 baht per month. About the daily living of elderly, 27.2 percent were difficult with living and 77.4 percent didn't have to take care of anyone. And with TMSE assessment 76 percent of Thai elderly didn't have any mental health problem (TMSE cut point = 23, lower = having problem).

This study used binary logistic regression to determine the related variables with mental health problem of elderly by using SPSS 11.0. For binary logistic regression analysis, all variables such as socioeconomic factor, physical and mental health self-assessment were put into the model and forward stepwise were selected to analyze the variables.

The last model from logistic regression presented the variables in the model had effect to the mental health problem of Thai elderly because after controlled other variables, 7 factors - age group, difficult of living, marital status, education level, personal income, family income, and taking care of couple were significant caused of elderly to have mental health problem ($p<0.01$) and were able to predict the elderly mental health problem at 15.7 percent when other variables were controlled. Age related to mental health, when age was higher that made chance of elderly to have mental health problem 1.079 times. Elderly who single, divorced, and widow were more likely to have mental health problem than married and stayed with their couple at 1.154 times. Higher education level was the cause of lower mental health problem at 0.245 times. Income amount were negative with mental health problem less likely 0.831 and 0.818 times. And the elderly who had to take care of their couple were less likely to have mental health problem than who had not at 0.833 times. In the other hands, Thai elderly who was difficult of living, would be less likely to have mental health problem than who were not at 0.765 times. From the finding of this study, we should concern about the elderly that older age, poor, and live alone because they are the highest risk population to confront with the mental health problem.

93-4

Demographic Processes and Informal Social Support Systems of the Elderly in Tehran

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Answers to the question, what support exists for the elderly when needed, are often simplified as "their children". Yet, there are related issues which need deeper inquiry such as the extent and scope of children's support and whether it is possible to compensate this support. Examining social and filial patterns and benefiting from task specific and hierarchical compensatory theories, this paper attempts at addressing these issues in Tehran. Using a sample of 527 elderly person ages 60 or more in Tehran in 2006, the relationship between emotional, instrumental, and financial dimensions of social and filial sources of support are investigated. In the context of the second phase of the demographic transition period, the size and the sex composition of family networks among the examined elderly are found to be large for both sexes. Despite the high number of children who have migrated, there are still a significant number of them remaining who are accessible by their parents, and the family support network is till dominated by filial support. The support that parents, especially mothers, receive from their children is not replaceable by other sources of support. However, because of similar group structures, the extended family and non-family support networks remain relevant in providing significant emotional and financial support to the elderly.

93-5

Elderly People's Quality of Life In Relation to Their Social Contacts with Emphasis on Gender in the City of Tehran

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Changes related to the social transition along with demographic transition influence the elderly people's quality of life. In other word, demographic and social variables affect the elderly people's quality of life. Factors such as lack of emotional support, reduction in social communication and social contribution have a decreasing effect on the quality of life. This paper aims to study the status of elderly people's quality of life in Tehran and to examine the effect of their social relationship by gender.

The data are based on a survey titled "the effect of socio demographic structure on elderly people quality of life in Tehran". In this research, 384 elderly people at the age of 60 years or above were selected and studied in Tehran. According to the results, the quality of life among the elderly men is higher than women in Tehran. So, there is a significant difference between both groups' quality of life. Also, the elderly people have a low level of social relationship therefore it could be said that the elderly women have lower level of social relationship than men. In addition, the independent variable of social relationship has a significant effect on the elderly persons so that the ones who had more social relationship they experience a better quality of life.

Key words: Elderly, Quality of life, Social relationships, Gender

94-1

Shaping the Epidemic: Application of Proximate Determinant Framework in Understanding the Factors Affecting the HIV in Maharashtra

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Indian HIV epidemic is exhibiting a declining trend. According to 2009 data new HIV infections have been reduced by 17% over the past eight years. Recent improvements in surveillance and other programmatic efforts have resulted into multiple source of data to understand the level and trends of the epidemic, providing an opportunity for meta-analysis and data-synthesis by triangulation to delineate the comprehensive picture and understand drivers of epidemic. Proximate determinant (PD) framework is used to tease-out factors affecting HIV vulnerability and application of decomposition analysis segregating interplay of multiple factors operating within the framework thus assuming larger importance in studying the interplay of multiple factors being operational at various levels. This study mainly focus at low-risk general males and high-risk male clients since they are main force that works as a bridge population to carry the infection mainly from high-risk women mostly female sex workers and same sex partners to low risk women, wives and girl friends. Also, more than 86% of all the infections route through sexual contacts.

The specific objectives of the study are

- *To understand HIV epidemic focusing on males by triangulating data from NFHS III IBBA I and BSS*
- *To understand factors affecting HIV epidemic using the proximate determinant framework*
- *To study the effect of behaviour and epidemiological transition on the level of HIV epidemic*

Data from 2 nationally representative surveys National Family Health Survey (NFHS) 2005-06 and, Integrated Behavioural and Biological Assessment (IBBA) Round I and data from Behavioural Sentinel Surveillance (BSS) 2006 has been used. The direction and hierarchy of variables used in the frame work are Underlying factors leading to Proximate Determinants resulting into Biological Determinants resulting in Health Outcome and finally leading to the Demographic Outcomes. Findings underscore multi-partner, condom-use and partner-mixing as PD for general men, with coital frequency an additional determinant for clients. Partner type and number of lifetime partners are significant determinants for both groups. Significant underlying determinants, after adjustment for PDs, are younger age ($p<0.1$), marital status ($p<0.05$) and alcohol ($p<0.05$) for general men and marital status ($p<0.05$), education ($p<0.01$), age at first intercourse ($p<0.05$) and prior HIV testing ($p<0.05$) for clients. PDs that are affecting the epidemiological outcome i.e HIV positivity have shown a set of commonality for both the groups and health outcome level has seen a strong contribution from knowledge of HIV. The underlying and proximate determinants operating for both these groups show some differences creating a demand for need based programme to deal with their specific vulnerabilities. There is an urgent need to address this group and study their behaviour as these are the general men a subset of which is bridge population, the clients of sex worker.

94-2

Strengthening Safe Sex Decision Making for Reducing Vulnerability of HIV among Youth: A Youth Club Based Study in Bangladesh

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Youth aged 15-24 years needs HIV/AIDS including Sexual and Reproductive Health (SRH) related information and services. The service delivery system in Bangladesh does not allow them to get information and services on those. With the support of GFATM an Operations research (OR) was conducted in 7 Youth Clubs (YCs) to address this issue, which was scaled up in 36 YCs. The objective of the OR and scale-up study was to improve access of male youth to life skills based SRH education including condom services through YCs and to create conditions for expanding the intervention model at national level.

The interventions were - conduct youth club-based group education session on HIV/AIDS and SRH by trained peer educators (PE), accessibility of condom, distribution of BCC materials and introducing referral mechanism. Study was conducted in nine districts of Dhaka division. Service statistics of YCs were collected and a survey was conducted among randomly selected 414 youth in 2005 (pre-intervention survey), 149 youth in 2006 and 655 youth in 2007 (post-intervention survey) to assess their SRH knowledge, attitudes and behaviors.

Comparing the results of pre and post intervention survey of OR and scale-up phase showed a significant improvement in comprehensive knowledge regarding the purpose of condom use, its effectiveness, correct use of condoms, HIV/AIDS, and STIs. Regarding safer sex practices, condom use during last sex (44 percent compared to 55 percent) increased among youth who attended all education sessions during the OR and the scale-up studies over the period of two years. The referral mechanism for STI services seemed to have worked well as service statistics showed that 27 percent of youth received services from clinics. The study reconfirmed the positive findings of the OR study and demonstrated that scaling up of the model at the national level would be feasible which will impact on million of youth.

94-3

Knowledge, Contraceptive Use and Prevalence of HIV among Adults in India

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HIV/AIDS assumed the status of a major public health problem in India demanding multi-pronged public health interventions. Awareness and knowledge on HIV/AIDS among the people is a pre requisite for the success of the health interventions.

The present research paper is taken out from the study of Millennium Health Development Goals (MDG), 2007. The principal objective of the study is to review and assess the status the country stands in relation to HIV/AIDS (Goal 6) and various issues and challenges that will be critical in achieving the goals.

In the present study we have assessed the status of HIV /AIDS by using two sources of data, first we use the traditional approach of estimation by using the data collected from various sentinel sites. Next we use the NFHS-3 data for the same purpose.

As per the data of NFHS-3, about 68.1 per cent of men and 34.7 per cent of women are using condoms consistently to protect against HIV/AIDS. When we look at the rural/urban differential, 85.6 per cent of males in urban and 59.5 per cent in rural areas seem to have correct knowledge on HIV/AIDS. As per the sentinel estimates, the number of HIV infected adults (15-49) are 5.2 million.

The Government of India established a National AIDS Control Program (NACP) to combat HIV epidemic. During NACP I (1992), there was increased awareness about HIV/AIDs, particularly among the urban population and subsequent successful intervention Programs and strengthening STDs clinics across the country were major achievements. During NACP II, the classification of states has focused on the vulnerability of states, with states being classified as high and moderate prevalence and high and moderate vulnerability. The primary goal of NACP III is to halt and reverse the epidemic by 2012.

94-4

Knowledge and Perceptions about HIV AIDS and Other Reproductive Health Issues among the Adolescents in Bangladesh

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There are 33 million adolescents in Bangladesh, constituting roughly a quarter of the total population. This cohort represents the next wave of parents and leaders in Bangladesh. This population group does not have adequate reproductive health (RH) information and services. Population Council conducted a study to assess adolescents' knowledge of and attitude towards RH along with their service seeking behavior in ten geographical areas in Bangladesh, which included both qualitative and quantitative methods. Adolescents' age 13 to 16 years were selected as the respondents of the study. The systematic sampling technique was used to select respondents for interviewing at least 100 adolescent from each location.

Study findings suggest that knowledge about HIV and its transmission was higher among male adolescents than female and it was higher in urban areas. More than 93 percent of the male and 78 percent of the female adolescents knew or had heard about HIV. The proportion having correct knowledge on routes to HIV transmission was higher among the male adolescents than the female. More than 90 percent of the adolescents reported that non-sterile syringe and HIV-infected blood through which HIV can be transmitted. Almost 90 percent of the male and 77 percent of the female adolescents mentioned unsafe sex and multiple sex partners as the routes to HIV transmission. Despite having of knowledge on correct routes of transmission to HIV, yet a large number of the rural and urban adolescents had misconceptions about the routes to HIV transmission. For example, about one-fifth of the adolescents believed that HIV can be transmitted through kissing/hugging and mosquito/insect bite. The proportion having knowledge on prevention of HIV/AIDS was almost equal between male and female adolescents except use of condom during sex. Urban adolescents had better knowledge compared to rural adolescents, which was more pronounced in case of female adolescents. Alarmingly, a small number of adolescents were aware of non-HIV STIs. Only 25 percent of the male and 5 percent of the female adolescents knew STIs other than HIV. Among them, 31 percent of the male and 40 percent of the female adolescents could not mention a single way to prevent STIs. Knowledge on ways of STIs prevention was better among the rural male adolescents compared to their urban counterpart.

Large difference was observed between the responses of male and female adolescents about the visiting commercial sex worker. Only 20 percent of the male and 76 percent of the female adolescents considered masturbation safer than visiting sex worker, suggesting males adolescents were more likely to be engaged in risky sexual behavior.

Efforts must be undertaken to remove prevailing misconceptions, improve knowledge about HIV and STIs and to provide RH services to adolescents.

94-5

Understanding Vulnerabilities to HIV and AIDS among Male Youth Gangs in Metro Manila, Philippines

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Many young male gang members in several cities in Metro Manila spend majority of their daily activities "having fun" or going to ‘gimik'. These ‘gimik' include risky behaviors such as sex, wherein sex is assumed as part of a youth gang's initiation ritual. Alcoholism and drug use are common within their circles, fueling sexual encounters. Paid sex is also usual because of the members' consistent need for money to support their activities. However, the low information about HIV and AIDS among this population group contributes to altered sexual health-seeking practices that affect their behavior.

This paper analyzes the dynamics related to sexual health-seeking behaviors of male youth gang members in three key cities in Metro Manila. Applying three anthropological frameworks in a survey and focus group discussion data gathered from 2007 to 2011, this paper seeks to explore constraints of male youth gang members from seeking medical treatment, issues related to self-medication, and issues on disclosure of their sexual health status.

Masculinity and the powerful view that men are invulnerable perceive going to the clinic as submission of power, making male youth gang members uncomfortable. Hence, they resort to self-medication, which is a rebellious response to the institutionalization of health particularly in the local level. Self-medication, for male youth gang members, is a way to claim their control over their bodies regardless of the outcome. The multi-layered stigma (being penniless, gang member, etc.) that they face in social hygiene clinics reinforces them to self-medicate. Further, a male gang member's idea of seeking help is applicable only to those who they trust the most, which range from family members to *tropa* or peers.

This study recommends reviewing HIV education and gender and sexuality curricula to be culture-specific and age-responsive particularly in discussing these issues among youth gangs.

95-1

Sex, Mood and Feelings: Revelations from a Philippine Study

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In the Philippines sexual health is seldom studied from a mental health or psychosocial perspective. This study explores whether or not sexual intercourse is correlated with mood, depressive symptoms, and feelings about relationship quality. Data were obtained from 90 couples who are part of a larger ongoing panel study of young people in Metropolitan Cebu, Philippines (Cebu Longitudinal Health and Nutrition Survey). The couples provided data about their sexual activity, mood and feelings by means of two types of surveys: a) face-to-face interview and b) mobile phone self-administered interview.

Of the 90 couples studied, 58 were legally married while 32 were cohabiting. Ages of wives ranged from 21-33 years (mean=26.2), and husbands from 22-35 years (mean=27.5). Their average years of education was 12.4; 83.3% of the men and 47.8% of the women were employed.

In the face-to-face interview, each individual was asked how many days in the *last four weeks* he/she had sexual intercourse (mean=5.7, range 0-25). Respondents were also queried about feelings of anxiety, pessimism, aggravation, fatigue and vigor in the last four weeks, as well as symptoms of depression (14 items) and perceptions of relationship quality (feelings of love and trust toward spouse/partner). Scores were computed reflecting intensity of each type of mood and feeling. Gender-stratified analysis was employed because of known differences in sexual and psychosocial behaviors between men and women. Multiple linear regression controlling for potential confounders (age, marital and work status, education, and pregnancy intention) revealed that men with higher anxiety and pessimism mood scores, and women with higher depressive symptom score had been more likely to report more number of days of sexual intercourse in the last four weeks. While this analysis serves to demonstrate association between frequency of sexual intercourse and some types of mood/feelings, it is unable to infer causation or the direction of such association.

The mobile phone interview permitted the application of the experience sampling method (ESM) or daily diary data collection on sexual intercourse and more transient feelings (mood) including relationship quality during the *last 24 hours*, spanning over a 4-week period. Serving as the main explanatory variable, a binary *lagged* variable was constructed to indicate the experience of sexual intercourse a day prior to the last 24 hours. Using the **xtreg** time series command of Stata (random effects model), analysis showed that sexual intercourse on the previous day was predictive of higher anxiety mood score for women and aggravation mood score for men, but lower pessimism and aggravation mood scores for women. It was also predictive of higher scores on relationship quality, especially for women. The study has shown that, among young Filipino couples, sexual intercourse affects mood and feelings, and more so with women than with men.

95-2

Multiple Sex Partners in the Era of HIV/AIDS: Evidence from Thailand

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Having multiple sex partners or having a partner who has multiple sex partners can be risk factors for HIV/AIDS. This paper addresses several key questions. How common is it for males age 18-59 in Thailand to have multiple sex partners? What are the correlates of having multiple sex partners? Furthermore, the paper examines sexual networks. Specifically, the paper looks at men who do have multiple sex partners and examines various characteristics of their relationships, including the use of condoms in these relationships. These questions are addressed using nationally-representative survey data from Thailand.

About 13% of all men age 18-59 reported having sex with more than one partner during the 12 months prior to the survey. In a multivariate analysis, older men and married men are less likely to have multiple sex partners, while more educated men and men who drink alcohol more frequently are more likely to have multiple sex partners. Religiosity, area of residence, and current working status are not significant in the multivariate analysis.

The respondents who have multiple sex partners report a wide range of relationships with their sex partners, e.g., commercial sex worker, girlfriend, wife. Not surprisingly, the mix of relationships the respondent has with his sex partners varies depending on his relationship status, i.e., single, married, cohabiting, or living apart.

With respect to each sex partner, respondents were asked “When you had sex with this partner, did you use a condom and, if so, how often?” (always, almost always, about half the time, sometimes, never) and “The last time you had sex with this partner, did you use a condom?” (yes, no, can’t remember). Not surprisingly, the likelihood that the respondent used a condom varied depending of the relationship with the particular sex partner, but the results were similar for both questions. For several types of partners, a majority of men reported that they used a condom (“always” or the last time, depending on the question). In particular, a majority of men reported that they used a condom with the following types of partners: commercial sex workers, “beer girls”, someone they just met, a friend, an acquaintance, and a “gik”. On the other hand, a majority of men reported that they did not use a condom with their wife or the person they cohabit with. With girlfriends, the percentage of men use a condom is similar to the percentage of men do not use a condom. The paper also examines how use of condoms with different types of sex partners varies according to the relationship status of the respondent. Finally, the paper also speculates on how the multiplicity of sex partners and use or non-use of condoms may affect the spread of HIV.

95-3

Substance Use and Risky Sexual Behavior among the Middle and Late Adolescent Migrant College Students in Shillong: A Study in North-East, India

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Thousands of students in the middle and late adolescent age group come to Shillong for pursuing their under graduate level studies from various parts of north-eastern states of India because the head quarter of North Eastern Hill University is located in Shillong. Moreover, many schools and colleges which were established by British and Irish missionaries since the 19th century stands like beacons even today after hundreds of years. The "adolescence migrant college students" if they can be so called, contribute to lot to the local economy, but they also bring with them certain behavioral ills and cultural trends which has a negative impact on their students life. These adolescence migrant college students come from societies where drinking of alcohol and consumption of betel nut with tobacco is a part of their tradition, folklore and culture, but conversely their states are "dry states" where selling of alcohol and tobacco is banned by law with pressure from the church and other socio-religious organizations. This "contradiction" has its bearing on them the moment they come to Shillong which is a "wet state" where alcohol, tobacco of various brands is available every nook and corner which offers a veritable attraction, may be even cultural shock to the adolescence. Coupled with the fact that most of these adolescence migrant college students stays in hostel or rented house or as paying guest far from their prying eyes of their parents and have easy access to any substances and girls, in a society where mixing between the two sexes is not considered a taboo and "dating is a fun thing to do" and often encouraged by peers and elders. The lethal brew of unhindered and unrestrained access to substances and women is such a heady concoction that pre-marital sex is a natural progression, often with disastrous consequences.

This study profiles substance use and engaging in sexual activity in Shillong among the middle and late adolescent migrant college students from Nagaland, Manipur and Mizoram. Self-administered questionnaire were deployed for the quantitative information from 457 students which were selected randomly from 15 colleges who were particularly present on that day. Overall 45 percent of the adolescent reported using substance use such as in the form of betel nut (27%), chewing gutka (19%), zarda tobacco pan (14%), smoking (34%), alcohol (29%) and drug (.7%). While 6 percent had reported sex among the adolescent and majority (82%) of them did not use condom with their pre-marital sexual partner. 29 percent did have multiple sexual relationship out of also which 62 percent did never used condom at the time of encountering. There is a strong correlation between substance use and engaging in premarital sex activity which is statistically significant at $rho=.116$, $p<0.13$.

95-4

Women's Agency and Sexual and Reproductive Health (SRH) in India and States

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At the International Conference on Population and Development (ICPD, 1994) in Cairo placed the population problem squarely within the development context focusing particularly on quality of life, human right and women empowerment. Empowerment of adolescent (both in and out of school) and youth with the knowledge and life skills are necessary for maintaining better sexual and reproductive health of women.

This study aims at measuring various dimensions of agency and understands the linkages of women's agency and the state of sexual and reproductive health among married and unmarried young women. Agency is a form of empowerment. With respect to agency we tried to find out sexual and reproductive health knowledge and practice among married and unmarried women in two disparate states of India namely Tamil Nadu and Bihar.

The study utilizes data from "Youth in India: Situation and Needs, 2006-2007"survey. Bivariate and Multivariate techniques are used to understand the differentials, and factors associated with agency and Sexual and reproductive health. The multinomial logistic regression is used to understand the factor associated with sexual and reproductive health knowledge. The agency is measured in the domain of decision making, freedom of movement and self efficacy along with education and current working status. Agency has classified in three categories namely Lower, Medium and higher agency among married and unmarried both. The comprehensive knowledge on SRH is measured with respect to HIV/AIDS, abortion, contraceptive methods and STI.

Findings reveal that higher educated and economically better off women, more exposed to mass media, living in urban area have higher agency for both married and unmarried women. Similarly women having higher agency are found to have higher odds of better knowledge on sexual and reproductive health. The other significant predictors are age, residence, caste and working status of women, wealth index, for both married and unmarried are women belonging higher agency have more likelihood knowledge about SRH. Findings investigate that knowledge of SRH is low among married and unmarried women both. For that there is need to address the specific intervention about awareness of sexual and reproductive health among young women.

96-1

Non-Consensual Sex within Pre-Marital Relationships: Experiences of Young Women in India

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Several studies conducted in India indicate that sexual coercion is an accepted practice within marriage, including among youth. Little is, however, known about the prevalence of coercive sex within pre-marital relationships, although a sizeable proportion of youth do engage in such relationships. Even less is known about factors correlated with experience or perpetration of sexual coercion within pre-marital relationships.Drawing on data from a sub-nationally representative study of youth in India, this paper examines the extent to which young women who had had pre-marital sex had experienced non-consensual sex, that is, sex by persuasion or force, and factors associated with it.

Analysis is restricted to 821 young women who reported pre-marital sex. In addition, data from in-depth interviews with 133 young women who discussed their premarital sexual experiences were included in the current analysis.

Of those who had had pre-marital sex, 33% reported that they were either persuaded (14%) or forced (19%) to engage in sex. The prevalence of non-consensual sex ranged from 24% in southern states of Andhra Pradesh and Tamil Nadu to 36% in the western state of Maharashtra to 45% in the northern states of Bihar, Jharkhand and Rajasthan. Among those who had experienced non-consensual sex, such experience took place within romantic relationships for 71%, non-romantic relationships for 13% and both types of relationships for 15%. Narratives of young women who experienced non-consensual sex perpetrated by a romantic partner show that the promise of marriage was often used by the male partner to justify non-consensual sex.The threat of breaking the relationship and promises that sexual act will not be repeated were also used.

Young women residing in urban areas and in communities characterized by physical fights among youth were more likely than their respective counterparts to have experienced sex by persuasion. Young women who had delayed sexual initiation and those who displayed self-efficacy were less likely than others to experience forced sex. Young women who experienced mobility in adolescence and who witnessed parental violence were more likely than others to report sex by force. Finally, those in southern states were less likely than their northern counterparts to experience sex by persuasion and force.

Findings underscore that young women from socially excluded castes, those residing in urban areas, those growing up in non-supportive family environment and those residing in communities characterized by physical fights among youth are more likely than others to experience non-consensyal sex within pre-marital relationships. Sexual and reproductive health programmes must take cognizance of these findings and equip these vulnerable groups with information and services that would enable them to make a wanted transition to sexual life. These programmes must target not only young people but also influential adults in their life, including parents.

96-2

Young Men as Perpetrators of Violence within Marriage: Findings from Early Marrying Settings in India

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Despite the pervasiveness of martial violence in India, very few studies have examined young men's perpetration of violence against their wives. This paper examines the extent to which young men perpetrated physical and sexual violence within marriage and correlates of such violence. A cross-sectional survey of married men aged 15-29 years was conducted in rural settings characterized by low median age at marriage in selected districts of two states in India, namely, Andhra Pradesh and Madhya Pradesh. This paper reports on data pertaining to 2,253 men who had cohabited for at least 12 months. Around 33% and 8% of young men reported perpetrating physical and sexual violence against their wives during the past twelve months, respectively. Young men who reported premarital sexual relationships and frequent exposure to pornographic films were significantly more likely to perpetrate physical and sexual violence. In contrast, men reporting high self-esteem had significantly lower odds of perpetrating physical and sexual violence. Findings call for life skills education programmes for young men that will develop their self-esteem, strengthen their skills in problem-solving, communication and inter-personal relations and negotiation, and promote new concepts of masculinity. Such efforts must target not only married but also unmarried young men.

96-3

Capturing Violence among Young Men in India: The Influence of Family, Community, Suppression, Addiction and Media Violence

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Youth violence is a growing problem worldwide.Violence pervades the lives of a significant proportion of all youth in the India, but has a particularly devastating impact on males. Young people constituted almost 315 million and represented 31% of the Indian population in 2001.Not only does this cohort represent India's future in the socio-economic and political realms,but its experiences will largely determine India's achievement of its goal of population stabilization and the extent to which the nation will be able to harness its demographic dividend. In the course of the transition to adulthood,young people face significant risks leading to violent behavior. However,only a paucity of research has examined the risk factors for violence across domains relevant to young men using longitudinal data.

With this note,this paper attempts to study the prevalence of violent behavior among young males aged 15-29 by socio-demographic and economic factors in India and selected states.It also tried to study the impact of exposure to parental violence and spousal violence on recent violent behavior among young men in India.Paper has also tried to identify other risk factors of violence among young men in India and examining the extent of these individual risk behaviors in influencing the violent behavior of young men in India. The present study is based on the youth data namely"Youth in India:Situation and Needs, 2006–2007",jointly conducted by Population Council and IIPS. Analysis is restricted to male population aged 15-29,who are referred as "young men/males" in this paper.Here violence has been used only in terms of "involvement in physical violence by the respondent in the last 12 months"prior to the survey date.Along with various socio-demographic,economic,domestic level, community level factors, some additional variables have been computed to understand the internalizing attitudinal behavior of the young men that can act as risk factors towards their involvement in violence like verbal or physical abuse,problems in confrontation,hesitation to express.Based on these variables various assessments were made with the help of various statistical tools.

At national level only 10% of young men are involved in violent behavior and this prevalence is higher among the adolescents as compared to other age groups of young men.The analysis clearly reflects the considerable impact of childhood exposure to parental violence in shaping conformation to the violent behavior among young men.Those men who are involved in spousal violence are more likely to be the perpetrator in violent behavior with others as compared to those men who do not get into spousal violence.It is evident that even after controlling the risk factors that are confined to family,factors such as abuse faced by the respondent,suppression, addiction of tobacco products,alcohol or drugs,influence of community violence have significant impact on young men's likelihood to involve in recent violent behavior.

97-1

Women's Autonomy and Obstetric Health Care Utilisation in India

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The concept of woman's autonomy is a multidimensional concept. Lack of autonomy makes women extremely vulnerable to risks because their decision making and access to critical resources is limited in countries like India. There is no such study that deal directly with autonomy and its influence over obstetric care utilization. This paper emphasizes on the various factors which influence woman's autonomy and then to what extent they affect the obstetric care utilization in combination with autonomy index in India. The data has been provided by NFHS-3 at unit level and only those women have been taken in the analysis who had given at least one birth in the last five years prior to the survey. Cross-tabulation and logistic regression has been performed in the study.

There are two sides of the relation between woman's autonomy and obstetric care utilization - demand side and supply side. The demand side shows the factors influencing lack of autonomy in the household which in turn influences a woman's decision to seek reproductive health care. These factors are education, employment, income, parity, age, attitude of other family members, exposure to mass media, fear of social taboos and inhibitions regarding sexual and reproductive health, availability of leisure time and cultural background of the women. The supply side includes accessibility of health services like availability if trained doctors (specially female doctors), shortage of medicines, emergency services, equipment, infrastructure (transport and communication system, water, electricity), distance of rural PHC, quality and affordability of services, cost of additional services like food, lodging for the accompanying family members, lack of respect, care and inappropriate guidance of the providers towards their clients.

The results show that the women in younger age group are having less autonomy as compared with women in 45-49 age groups. The similar trend is observed in educational attainment. In general, women with more wealth, employment, from community other than SC-ST and OBC, urban residence are likely to avail obstetric care services. Lower parity women tend to give careful attention to seek antenatal care and delivery assistance due to their inexperience in pregnancy. There are 60 percent women having full autonomy who had 4 or more antenatal visits during pregnancy. The same pattern can be seen in the case of during pregnancy care; during pregnancy-weighed, blood sample taken, urine sample taken, blood pressure taken, abdomen checked. Less number of women has been alerted for pregnancy complication among less autonomy groups than full autonomy groups. Higher proportion of women with less autonomy reported that they had delivery in the home as compared to full autonomy women, who had delivery mostly in the public or private hospital. Thus the autonomy index significantly influences the utilization of obstetric care services.

97-2

Intimate Partner Violence and Unintended Pregnancy in India

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Intimate partner violence (IPV), a common form of violence against women perpetrated by husband or intimate male partner, often happens in low developed countries. IPV is found to be associated with range of negative effects: often leads to still birth, premature delivery, low birth weight, high risk of STI, lower use of maternal health care etc. In India, at least half of battered wives reported the episode of violence while they were pregnant. However, there is no clear understanding about the association between IPV and unintended pregnancy in the context of India.

The present study examines the relationship between IPV and unwanted pregnancy in India and three disparate states, namely, Uttar Pradesh, Maharashtra and Tamil Nadu that vary in socioeconomic and demographic parameters.

The study uses data from third round of National Family and Health Survey conducted during 2005-2006. The original sample size is restricted to currently-married women of reproductive age who completed the surveys Domestic Violence Module and who had a pregnancy in the past five years. Using multinomial logistic regression, the study compares outcomes of last pregnancy (wanted birth, unintended birth, and abortion) by exposure to lifetime IPV.

Women who ever experienced IPV showed consistently higher risks of unintended pregnancy in India. After adjusting for socio-demographic covariates and lifetime contraceptive use, the study found that women with a history of intimate partner violence reported higher risks of their last pregnancy ending in unwanted live birth or in abortion. The study stress the need for developing policies and programs that integrate reproductive health and IPV components to lessen the risk of unintended births and abortions among women living with abusive partners in India.

97-3

Husband's Alcohol Consumption and Sexual Violence within Marriage: Experience of Female Migrants in Low Income Communities of India

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The nexus between alcohol consumption and its effect on poor sexual decision making, unsafe sex, multiple partners, and increased sexual experimentation has been extensively established through empirical study relying on self-report survey data. Several works have linked alcohol consumption with more menacing behaviors including sexual assault through use of aggression and coercion and impairing women's ability to perceive threats and resist attacks including sexual violence within marriage. However, research on factors associated with married women's ability to manage sexual relations with spouse is limited. This paper analyzes the factors affecting married female migrant's ability to influence their sexual experience within marriage, specifically sexual communication with spouse. It also examines the extent to which alcohol consumption by husband leads to sexual violence and affects their sexual health. The paper is based on quantitative data collected from 513 female migrants and few in-depth interviews conducted in eight densely populated slums of Mumbai, India.

97-4

Women's Empowerment is Critical to Healthcare Utilization in India: A Structural Equations Approach

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The association between women's socioeconomic status and health outcomes particularly child mortality is well established. The strong positive association between women's education and health status suggests that education empowers women to be able to negotiate household dynamics, access physical and financial resources and communicate with health personnel on matters related to their own and their children's health. In this paper, we shed further light on the underlying mechanisms between sociodemographic characteristics such as women's education and maternal and child healthcare utilization, and contribute substantively and methodologically to the literature on women's empowerment.

Using data from the nationally representative National Family and Health Survey 2005-06 in India, we explore to what extent does women's empowerment affect healthcare utilization for prenatal care and institutional deliveries. Furthermore, we examine the extent to which demographic and socioeconomic factors affect empowerment and healthcare utilization, and compare and contrast these relationships. We use structural equation modeling to develop a latent construct of women's empowerment, drawing on five measures pertaining to women's participation in household decision-making on daily and household purchases, use of husband's earnings, visits to a health center and visits to family or relatives, and differentiate between women reporting no participation, making these decisions alone, and making them jointly with husbands.Cluster-fixed effects account for provider availability.

We find that women's empowerment and healthcare utilization are positively associated, and that empowerment in a key underlying mechanism between women's education and healthcare utilization in India. Importantly, we also find that a significant positive relationship exists between empowerment and healthcare even after demographic and socioeconomic factors affecting both empowerment and healthcare are accounted for. This suggests that women's status in their household directly affects their ability to access healthcare, independent of explanatory variables such as educational attainment, employment status, household wealth, caste, religion or demographic variables such as age at marriage or parity. Additionally, we find that women's empowerment is lower in households with higher levels of the husband's education, and that household wealth is positively associated with healthcare, but has no relationship with women's empowerment.

Our findings suggest that investments in human and social capital especially education are indeed important in increasing levels of women's empowerment in household decision-making as well as healthcare utilization. However, efforts at improving women's access to healthcare also need to examine ways of influencing household dynamics and women's household status. We believe our method contributes to a better understanding of empowerment as an unobservable latent construct, the complexity or multidimensionality of which may not be adequately captured by a single proxy variable for empowerment, for instance educational attainment, or by summative indexes which do not address issues related to the reliability of each indicator or multicollinearity between different indicators.

98-1

Demographic Change, Catastrophic Health Spending and Impoverishment in India

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Health care in India is provided by both public and private sector. Of the total health expenditure, the share of private sector is maximum with 78.05%, public sector at 19.67% and the external flows contribute 2.28%. In the contribution of private sector, households contribute a significant portion at 95%, constituting 71.13% of total health expenditure. This out-of-pocket (OOP) health spending is found to have increased further, particularly in the post reform period i.e. after 1990s.

The economic reforms introduced fiscal discipline in the state expenditures during the 1990s gets reflected in the form of reduction in the non-salary components of the social sector and health sector led to changes in the organization, structure and health financing, particularly in OOP expenditure. And this increase has negative consequences on increasing catastrophic health spending and impoverishment.

Nevertheless, while studies attempted to analyze the impact of policy changes to health care cost, attempt has not been taken how demographic change or demographic transition would influence health spending as well on poverty. With demographic transition age structure changes where proportion of population in the early age group declines and proportion of old aged population increase. This change in the age structure could have strong impact on health care cost since health care cost is expected to be higher among old aged population with the higher burden of disease. Therefore, when analyzing the catastrophic expenditure as a ratio of health expenditure to total household consumption expenditure, it is essential to take into account of age structure change. This adjustment will enable decomposing the impact of policy and demographic change to the catastrophic health spending and household impoverishment.

With the above backdrop, this paper estimates changes in catastrophic health expenditure and its impact on impoverishment after adjusting the demographic change using NSSO data collected in 52^{nd} and 60^{th} round during the year 1995-96 and 2004 respectively. It also attempts to measure catastrophic expenditure and poverty at socio-economic standard and the state levels. It is found that OOP payments are the principal means of financing healthcare in India and it has increased over the last decade and a major portion is contributed by demographic change. The increase in OOP expenditure has also pushed a proportion household facing catastrophic health spending and impoverishment. It is also evident that lower and middle expenditure households bear the greater portion of negative consequences of catastrophic health expenditure with higher level of impoverishment.

98-2

Demographic Events and Economic Conditions of Rural Households in Bangladesh

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Demographic events, such as death of adults and marriage of children place a heavy burden on household economy, while economic and labour migration of adults may lessen the burden. This study examines the effects of demographic events, controlling for a number of confounding variables, on economic condition of rural households in Bangladesh.

This study uses data of the Health and Demographic Surveillance System (HDSS) maintained by ICDDR, B in Matlab, Bangladesh since 1966. HDSS recorded possession of durable goods, including land for a large number of households in 1996 and 2005. The principal components analysis of the durable goods assigned an asset score to each household, and then used that score to divide households into quintiles. A higher score or higher quintile represents a better economic condition in the HDSS area. HDSS data on death and out-migration of adults (aged 15-59 years) and marriage of boys and girls occurred during 1996-2005 were linked to household asset scores in 1996 and 2005. Analysis included 31,049 (80.3%) of 39,895 households surveyed in 1996 which had the same household head both in 1996 and 2005. Bivariate and ordinary and logistic regression analyses were used to estimate the effects of the specific events on household asset score and on change in economic condition in 2005, controlling for households asset score in 1996 and sex, education, and religion of the household head.

Death of adults and marriage of girls during 1996-2005 were associated with lower household asset scores in 2005 and higher odds ratios (OR) of deterioration in household economic condition [OR 1.11, 95% CI 1.03 to 1.19; and OR 1.12, 95% CI 1.03 to 1.21 respectively] compared to households with no such events. Out-migration of adult males, but not females, to urban areas and foreign countries and marriage of boys were associated with higher household asset scores in 2005 and higher OR of improvement in economic position [OR 1.24, 95% CI 1.15 to 1.33; OR 2.19, 95% CI 2.02 to 2.37; and OR 1.21, 95% CI 1.10-1.33 respectively] compared to households with no out-migration or marriage of boys. The other factors associated with higher household asset score and household economic condition in 2005 were higher education of household head, female household head, and higher household asset score in 1996. Findings suggest that the government should attach high priority to health, especially of adults; abolition of dowry; and encouraging out-migration.

Keywords: Household, economic status, labour migration, adult death, marriage, Bangladesh

98-3

Demographic Dividend and Development: Sri Lankan Scenario of the Age Structure Transition

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Past half a century of Sri Lanka is an era where the total size and the age structure of the population has been subjected to irreversible changes. This paper using secondary data is an attempt to identify the manner in which age structure transition affects the economic development in Sri Lanka. The bright side of the story is the demographic dividend, also known as the 'window of opportunity'. This is a by-product of the age structure transition and believed to have positive impacts on economic growth. The age structure transition in Sri Lanka has produced a demographic dividend, ranging from year 1991 to 2017, which is conducive for a rapid economic take-off. During this period, the proportion of the working age population (aged 15-59) is significantly larger than the proportion in the dependent category (aged 0-14 and 60+ years). Newly industrialized countries (Republic of Korea, Taiwan etc) have utilized the demographic dividend to gain economic growth.

Sri Lankan demographic dividend will not last long since the elderly dependency is increasing rapidly. As a result of the recent increase in fertility from below replacement to above replacement, the child population will also grow in Sri Lanka. Hence both the elderly and child population are increasing, creating double burden in terms of dependency. This trend could fade the demographic dividend earlier than expected. Therefore demographic dividend is an opportunity that needs to be used immediately. If this opportunity is missed out, the policy makers will have to address the consequences of an increasing dependency burden, which would further depress the efforts for required economic development.

Mere existence of a favourable demographic dividend would be ineffective without a proper environment for economic acceleration. An increasing working age population seeking gainful employment, but with no proper job opportunities will be a dilemma for a country. Nevertheless, in a congenial environment of political stability, adequate savings, investment potential, human capital, productivity and the knowledge economy, the optimum utilization of the demographic dividend to gain economic acceleration would materialize.

Sri Lankan policy makers have not yet addressed problems of the demographic changes (ageing, social protection, etc.). The stagnant economy and the inadequacy of employment opportunities in the local labour market for those seeking gainful employment have intensified the emerged demographic and social problems. Inadequacy of economic planning procedure to harness the emerged window of opportunity through the transition process is one of the important problems to be addressed immediately if the current problems are to be resolved.

Utilizing the peaceful political environment achieved after 30 years of war, it is the time for policy makers to utilize of the window of opportunity created by the demographic dividend to face future challenges of ageing.

98-4

Fertility Decline under Low Development: The Case of Odisha, India

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In spite of having a large proportion of population living below the poverty line, very low level of industrialization and urbanization, agrarian economy the decline of fertility in Odisha, one of the extremely backward states of India, is quite impressive. This anomaly has attracted the attention of population scientists in recent years. An analysis of the Period Parity Progression Ratios computed from the fertility histories obtained in the National Family Health Survey III gives strong evidence of rapid transition towards predominantly two child families in Odisha. The results based on the available secondary data sources and also on a field investigation in one district of Odisha revealed that the use of contraception has been remarkable among the poor. People in Odisha have realized that children have become increasingly costly, while the benefits from them have not kept pace with the higher costs, leading to the adoption of small family norm.

99-1

Building a Unified Poverty Database Using the Population Census Data

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Poverty alleviation programs in many countries encountered many problems in their implementation and developing countries such as Indonesia is no exception. The main problem appeared to be miss-targeting, where many poor households who were supposed to receive benefits did not and, even worse, those who were not considered poor received benefits intended for the poor. The main cause of the miss-targeting is the fact that reliable individual household data were not available. Line ministries which have their own social protection program often used different databases of poor households to be used as beneficiaries of the programs. This caused a lot of confusion when aid intended for the poor is distributed. As a result, many did not fall into the right people. Sadly, there were even reports that government aid was evenly distributed among all the people, including those who did not deserve to receive assistance intended for the poor. The Indonesian government is planning to introduce the so-called poverty database unification where all social protection programs from the Rice for the Poor Program, The conditional Cash Transfer Program to the Health insurance for the poor program must use the households in this single database as beneficiaries of the programs. The problem is to find a suitable data source in which the database can be built.

The implementation of the 2010 Population Census presented an opportunity to use the data to collect information on poor populations in Indonesia. The census not only collects information on every household in the country, but also using the long form to capture many demographic and household characteristics of the population. The information was deemed sufficient to obtain poor households in Indonesia. One drawback of the population census was that the data did not have an expenditure or income variable needed to determine whether or not a household is a poor household. Expenditure data from The National Socio-economic survey (Susenas) was used as a proxy to estimate expenditure of all households captured in the census.

Thus, the main purpose of the paper is to assess the validity of the unified poverty database through its methodology in linking the population census data with the household survey data. The lowest 40 percent of the population is obtained from the census data using the poverty mapping procedure to determine possible target households for field verification. After field verification, the proxy means testing procedure was applied to determine the ranking of targeted households which make up the unified poverty database. The paper also reviews how the database of poor population is collected, processed and analyzed so that a reliable source of poor household data can be developed for all social protection programs.

99-2

Poverty is Related to Number of Protest Demonstration

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An application software is developed to collect soft copy report or news on the web, trying to collect raw data as a supplement to paper-based local news paper. It is argued that there is a standard operating procedure that sensitive report or news on the web can be given clarification by local government officer. Once clarification is accepted then respective report or news on the web will not appear in paper-based local news paper. That is sensitive report or news on the web can be used to verify reliability of sensitive report or news in paper-based local news paper.

Soft copy report or news is believed to exist in television and radio as broadcast materials. However broadcast materials is not accessible to general public. Indonesia has at least one local news paper for each provinces. Currently the application software is developed not to cover home page of local news paper. It covers only news provider such as www.yahoo.co.id. To start with, the application software collects report or news about protest demonstration or similar rally. Intermediate output will be count of report or news by province.In the future after collection of report or news about protest demonstration or similar rally, it is expected more types of report or news can be collected such as eleven selective components of Indonesia Democracy Index.

Since protest demonstration is measured in high scale of measurement then it is subject to Pearson product moment correlation calculation. As an illustration : score of protest demonstration is correlated with number of poor people within a province. It turns out that using 2009 public domain data, except for a few provinces, the correlation is stronger than 0.7 in a range of plus one to minus one. In the future final output is expected to be a coloured thematic country map.

99-3

The Link between Extreme Poverty and Young Dependents in the Philippines: Evidence from Household Surveys

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The high level of extreme poverty or those experiencing hunger in the country is the most pressing issue that needs to be addressed by our policymakers. Official government statistics and data from self-rated hunger surveys show an increasing trend in hunger incidence among households. On the one hand, data from the National Statistical Coordination Board (NSCB) show that the percentage of households experiencing hunger almost remained the same from 8.2 percent in 2003 (equivalent to 1.36 million households) to 7.9 percent in 2009 (1.45 million households). On the other hand, the Social Weather Stations (SWS) quarterly surveys on hunger incidence show an increasing trend in the percentage of families that experienced hunger, reaching 21.5 percent (about 4.3 million households) during the 3rd Quarter of 2011, the highest since December 2009. This study looks at the determinants of extreme poverty among households using the data from the Family Income and Expenditures Survey (FIES) by applying the concept of regression discontinuity design to distinguish the characteristics of "extremely poor" (subsistence poor) from "poor" households. Using a *logit* model on the pooled FIES data in 2003, 2006 and 2009, the results show that presence of a young dependent in the household increases the probability that the household will be *extremely poor* by about 4 percentage points, controlling for other factors. Other variables that influence the probability of the household being *extremely poor* are the education of the household head and percentage of cash transfer from abroad. Moreover, regional characteristics such as varying food prices and underemployment rate explain a lot about the probability of the household being *extremely poor*. We cannot ignore the empirical evidence linking population growth and poverty. Development policies aimed at addressing poverty incidence in the country must include measures that will manage the country's bourgeoning population.

99-4

A Comparative Study of Financial Economic Crisis (1997) and Global Economic Crisis (2008) on Population Health in Korea

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Most studies have been reported that economic crisis or recession may affect population health. Korea experienced a severe economic crisis in the late 1990s. Although the crisis officially ended in 2001 when the government repaid most of the emergency relief fund to the International Monetary Fund (IMF), the adverse impact of the crisis remained in almost all spheres of Korean society. In addition to, Korea was faced with global economic crisis at 2008. We consider that both financial crisis (1997) and global economic crisis (2008) have an effect on population health, respectively. While economic crisis and health inequality have been widely studied by a number of previous studies; little attention has been paid to comparative study of economic crisis. This study examines the impact of health inequalities *according* to character of economic crisis.

The aim of this paper is to explore the relationship between economic recession and health inequalities in Korea focusing on the Asian economic crisis in 1997 and the global financial crisis in 2008.

We will employ the Third National Health and Nutrition Examination Survey(1998,2009) conducted by Korea centers for Disease Control & Prevention & Korea Institute for Health and Social Affairs to compute the prevalence of chronic disease and health behavior both two time periods. The analysis was restricted to Korean aged 20-49. The frequency of their contact with alcohol and smoking is higher than any other age group. Educational attainment and income were considered as indicators of social economic status. Regression analysis is used to identify SES factors.

It may result financial crisis (1997) is significantly more aggravating on population health than global economic crisis (2008). First economic crisis was an unexpected event for people. They suddenly lose their jobs and had to cut down their living expenses. Though actual impact of global economic crisis is bigger than financial crisis, people certainly cope with the situation compared to previous experience. The study will be able to suggest safety net should be simultaneously considered in reviving economic.

P0101

Population Factors Effective in Reducing Total Fertility Rate in Iran, 1986-1996 and 1996-2006 Decades (Urban and Rural Areas)

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Considering the importance of the trend of changes in total fertility rate in demographic researches on one hand, and the significant changes in fertility in Iran during 1986-1996 and 1996-2006 decades on the other hand, the present paper has studied population factors effective in decreasing total fertility rate in Iran during the 1986-1996 and 1996-2006 decades.

There is wide usage of total fertility rate (TFR) in demographic studies, particularly in population forecasts and compiling fertility hypotheses. Among questions, which any demographer faces in preparing and compiling fertility hypotheses, are the questions that, by which factors the changes in TFR are affected? And how is it possible to identify these factors?

The total fertility rate, is the sum of age specific fertility rate multiplied by 5 (provided that the rates are for 5 years age group).

As the age specific fertility rates are decomposed into age composition of women and the level of fertility among married women, changes in total fertility rate could be decomposed into these two factors, and measure the changes in these two factors.

Now, the question is that, how much has been the share of each factor in decreasing the total fertility rate in Iran during 1986-2006 decade? Giving an answer to this question is the major objective of the present paper. In order to reach such an objective, the *Total Fertility Rate Standardization Method* has been used. This method is based upon the hypothesis that, the births number decrease in communities having high levels of fertility, starts with changes in cultural, population, and social specifications and features of these communities. That is, changes in cultural, population, and social specifications and features of the communities, might have a significant influence on the age in which women enter marriage life. Because, changes in the attitude of people's of the community on the age of marriage and establishing a marriage life will have an effect on fertility rate.

Therefore, this paper has tried to study the TFR changes within two 10 year periods, that is, 1986-1996 and 1996-2006, by utilizing the statistics and figures of National Census of Population and Housing in 1986 ,the results *of fertility- mortality survey* in 1996 and Census of Population and Housing in 2006, all prepared and compiled by the Statistical Center of Iran. This study has been carried out and calculated for the whole country and separately for urban and rural areas.

The result obtained from standardizing total fertility rate shows the role of postnuptial factors (fertility level of married women) in lowering the fertility, has been more than prenuptial factors (age composition on women), and the case has been more severe during the second 10 year period than the first 10 year period.

P0102

Knowledge, Attitude and Practice of Family Planning among Men of Uzbekistan's Part of Ferghana Valley

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In the recent years Uzbekistan government boosted efforts on improving population reproductive health with particular focus on family planning. However most of the interventions targets women of reproductive age whereas men remain mostly out of the focus of the interventions.

A survey of 302 men has been conducted in several rural and rural locations across Uzbekistan's Ferghana valley.

More than 73% of respondents are aware of contraception. However percentage of those who are aware of contraception is significantly higher among rural men (90% vs.69.8%). The most familiar modern family planning method is intrauterine device (IUD), which is known to 69.23% of respondents. About 50% of them know condoms and oral pills (54.75% and 49.77% respectively). Injectable contraceptives are known to 26.7% of respondents. Only 4.98% of respondents know surgical sterilization.

Current use of modern family planning method is relatively high. About 50% of respondents reports using any modern method at the time of the survey. Significantly more rural respondents reported using family planning as compared to urban ones (62.5% vs.48.1%). Use of contraception is low among men under 25 and makes significant rise in the older age groups with maximum percentage of respondents using modern contraception 45-55 age group. The most plausible explanation of this phenomenon is that most of the men get married at the age of 22-23.

IUD remains by far the most used method of contraception with 62.2% of respondents applying it. Injections are the second in frequency; while pills and condoms in total constitute only 12.8% of method mix. Overwhelming majority of rural respondents reported the use of IUD (80%) and only 20% of them use injectable contraceptives.

About 31.5% of respondents acquire family planning method in a pharmacy. About 35.6% of respondents reported buying contraception method in a pharmacy, whereas in rural area only 12.9% of respondents reported this. In the age context overwhelming majority of men under 25 (about 80%) reported buying family planning method in a pharmacy.

The findings of the survey show relatively high awareness of Uzbek men in Ferghana valley about family planning. The survey consistently demonstrates better knowledge and use of family planning among rural respondents. The results corroborate the current trend in family planning interventions that in greater extent targets rural population.

Another important finding that poses question about access to contraception for certain groups of population is significant proportion of respondents stated buying contraceptives in pharmacies despite free availability of contraceptives in SDPs. The most affected group is young and most likely unmarried men. This topic requires further research in order to elicit factors making clients to bypass free distribution of contraceptives.

P0104

Estimation of Fertility Reduction Index by Using the Child Woman Ratio (CWR) in Iran, 1996-2006 :Policy Implications

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It is well known that twentieth century witnessed remarkable demographic transformations. The Islamic Republic of Iran pursued a frankly pronatalist policy during the first decade of her life. The result was a tremendous rise in fertility and the population rose at an annual rate of 3.9 percent between 1976-1986. Partly in response to this rapid growth, the government adopted an anti-natalist policy and the long suspended national family planning program was revived in 1989.The program has proven exceptionally successful both in terms of contraceptive prevalence rate and a sharp decline in fertility.

The aim of this paper is estimate of fertility reduction index by using the Child Woman Ratio (as an Indirect Method) in the selected provinces of Iran (Ardabil, Fars, Ilam, Kerman, Khohgilueh, Khozistan, Qom, West Azerbayjan and Yazd). The main findings of Statistical Center of Iran's (SCI) censuses 1996 and 2006 are analyzed. Our results show that all of selected provinces have experienced convergence in fertility reduction as compared with all country. General result of this study has confirmed by earlier invaluable research papers.

P0105

Fertility and Nuptiality in Poland - Cohort Perspective, Birth Cohorts 1911-1986

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The aim of the study, which synthetic results are presented in our paper was:

- the analysis of fertility and total cohort fertility rate according to education level,
- the analysis of the process of forming marriages and cohabitation and their duration.

As the methods of analysis the nonparametric modeling and descriptive analysis were chosen.

Cohort analysis of fertility and nuptiality in Poland was based on the data from "Female Fertility" survey conducted during the National Population and Housing Census 2002.

The most common approaches to the analysis of relationships formation and dissolution, based on the data from national censuses, is cohort approach based on real generations (longitudinal) and hypothetical generations (cross-section), which focuses on analyzing the changes taking place in a given population. Data allows us to recreate the formation process of each union and its duration (261 708 unions). Poland is a country which still realizes the traditional model of the family, where marriage is the basic form of family. Special attention is paid to the analysis of first relationships. The percentage of pairs in informal relationships remains at very low level; however it slowly rises among the younger cohorts. The basic form of relationship is still marriage, which is also the most stable and long lasting. Among younger cohorts a larger percentage of cohabitation preceding marriages can be observed, which lowers the age of entering the first relationship, and makes it relatively short-lived compared to the first marriage.

The relation between the level of education and the process of fertility is widely discussed in literature. However the assessment of fertility behaviors in the cohort fertility approach is much less often. The delaying effect that remaining in education process has on a woman's childbearing is widely documented. For all births similar tendencies and differences can be observed. The higher the education level, the lower the total fertility rate and earlier women decide on having the first and subsequent children. Women behavior for second births is similar for women with primary and vocational education, while the intensity of first births is similar for all three levels of education: primary, vocational and secondary. The only exceptions are women with higher education. A big advantage cohort analyses have over cross-sectional research is the fact that they offer insight into actually realized fertility, that is the time of events' occurrence and their intensity, while in cross-sectional research such data have to be estimated which will necessary mean an approximation, without full knowledge about actual state of the matter.

Analyses, assessments and presented results, regarding the cohort analysis of fertility and union-formation processes are unique and outstanding analyses, which document the processes and scope of changes of the analysed processes according to generations in Poland.

P0107

Couples' Characteristics and Its Impact on Their Fertility in India

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So far the research in reproductive health and demographic behaviour is focused to individual level variables taking the wife or husband alone. However, ICPD conference in Cairo in 1994 has put forth demand to consider both men and women in its way to improve the health of women and children. Keeping this in view, there is ample research being carried out to study the effects of couple characteristics on health of the women and children. In India, the researches on understanding the relationship between couple characteristics and reproductive behaviour are scarce. The present paper discusses three important characteristics namely age, education and caste differentials among the couples in India and their effects on fertility(children ever born).For this paper, data from the National Family Health Survey-3 (NFHS-3, 2005-06) has been used. NFHS-3 data in India provides information about basic socio-demographic characteristics of both husband and wife and their life styles. NFHS-3 collected information from 42185 currently married couples. For the present paper, we have used data of 39292 couples who married only once while analyzing children ever born. In NFHS-3 information about total children ever born, ideal family size and desire for additional child is collected separately for both husband and wife. For the present paper information given by the woman about number of CEB has been taken as the basis for all further analysis. In all demographic studies, woman's reporting about fertility and contraception is considered as more authentic and used in all analysis and policy matters. The main objective of this paper is to see how the differences in age, education and caste among the couples affects the fertility of the couple. Both bivariate and multivariate analysis has been used for the analysis. In order to examine controlled effect of age difference, education difference and caste difference among couples on children ever born, multiple regression was carried out. In the regression analysis, children ever born is taken as the dependent variable. Independent variables are age difference, education difference(in years), caste difference (women marry men of same caste, women marry men of higher caste and women marry men of lower caste), marital duration , place of residence, education of wife , religion, caste and wealth index. It is clear that age and education difference have positive effect on fertility of the couples implying that with the increase in age and education difference among couples, fertility also increases. The caste differentials among couples does not show any significant impact of the couple's fertility behavior.

P0108

Fertility and Sustainable Development in Tamil Nadu, India: A Welfare Programe and Reforms Approaches lead to Swift of Demographic Changes

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Social welfare reforms emphasizing the sustainable development and demographic change through uplifting the status of women were enabled by the political power equipped with statesmen whoever grown and reign the government under the leadership of Erode V. Ramasamy Naikkar popularly known as 'Thanthai Periyar.' They took interest and initiative for implementing the socio-economic developmental programmes. This paper makes an understanding of relationship between replacement level of fertility and socio-political reform in the study area and one district called Thanjavur district had selected and studied in Tamil Nadu about 360 couples have been interviewed with population proportionate size of rural urban respectively. The study reveals that programme effect of social reform has significant differences with fertility and demographic development. The logistic regression is also proved the fact that the socio welfare reforms made significant change the demographic scenario in the Tamil state.

P0109

Contraceptive Use and Method Choice among Poor in Asian Countries

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The widespread increase in the use of contraception is one of the most dramatic social transformations of the past fifty years. The use of safe and effective methods of contraception allows couples to determine the number and spacing of their pregnancies. A question that has not been addressed to date is whether the poor have also experienced this positive trend? It is essential to determine whether the absolute poor are able to use contraception. In short, is the apparent global progress in the use of contraceptives also benefiting the poorest? To answer this question the study aims to investigate the trends, patterns, differentials and determinants of contraceptive use and method mix among poor and non-poor women in Asian countries. The analysis is based on the Demographic and Health Survey (DHS) data conducted in five Asian countries namely Bangladesh, India, Indonesia, Nepal and Philippines. However, these countries are in different stages in contraceptive as well as fertility transition. Three rounds of DHS surveys for each country have been considered which is helpful for trend analysis. All these surveys are classified into three categories: First period, Middle period, and Recent period. The inter-survey gap between First and Recent period is more or less ten years. Economic status is measured by computing a “wealth index”, i.e. a composite indicator constructed by aggregating data on asset ownership and housing characteristics using principal components analysis (PCA). Computed wealth index has been standardized by taking the same asset indicators for each of the three periods of time. A sample of currently married women of reproductive age (15-49) has been considered for analysis purpose. Both bi-variate and multivariate statistical analyses have been applied in the study. Trend analysis suggest that the contraceptive prevalence rate (CPR) is gradually increasing among poor women over time and the gap between poor and non-poor has narrowed down especially in Bangladesh, Indonesia, Nepal and Philippines. Modern contraceptive methods are more popular than traditional methods irrespective of the economic status. Interestingly, till now almost one-fifth of poor and non-poor women are relying on traditional methods in Philippines. Oral pills are the most preferred modern method in Bangladesh among poor compared to non-poor women. On the other hand, female sterilization is more popular method in India, Nepal and Philippines and the gap between the poor as well as non-poor is negligible. In case of Indonesia 32 percent poor women preferred injection compared to 27 percent non-poor women. Use of condom and male sterilization was very low across economic stratum in all the countries. The multivariate regression analyses reveal that age, education of mother, working status, number of living children, child mortality and mass media exposure are important determinants of contraceptive use and method choice.

P0110

Fertility Trends and Differentials in Bangladesh and Pakistan

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With modernization and launching of family planning program since 1960s, fertility in some Muslim countries has declined, from a high level of above 6 in the 1960s, to near replacement level as in the case of Indonesia (2.2) and Bangladesh (2.4) in 2005-2010. However, fertility level in several Muslim countries remains high, and these include Yemen (5.5) and Pakistan (3.7). A comparative analysis of the fertility trends and determinants in Bangladesh and Pakistan is carried out to shed some light on factors affecting the divergence in fertility transition among Muslim countries.

Data for this paper come from the 2007 Bangladesh Demographic and Health Survey (DHS) and 2006-2007 Pakistan DHS. The total fertility rate (TFR) is used to examine the fertility trend in these two countries, along with socio-economic indicators. Detailed analysis of socio-economic and proximate determinants on fertility will be based on children ever born (CEB) among married women aged 15 to 49 years.

The TFR in Bangladesh and Pakistan has been declining from about 6.8 and 6.6 respectively in early 1970s. Bangladesh has experienced a much more rapid pace of fertility decline to 2.4, while the pace of decline has been more gradual in Pakistan, with a TFR of 3.7 in 2005-2010. The divergence in fertility between these two countries can be attributed largely to the differential family planning practice, with Bangladesh registering a contraceptive prevalence rate (CPR) of 56 percent against 27 percent in Pakistan around 2005. Although the singulate mean age at first marriage in Pakistan (23 years in 2004-2005) has been considerably higher than that in Bangladesh (18.7 years in 2004-2006), marriage postponement is not enough to make up for the much lower CPR. Women's education has also contributed to the divergence in fertility level between these two countries. About 70 percent of Bangladeshi women had been to school, as compared to only 34 percent of Pakistani women, and fertility level is strongly negatively correlated with educational level in both countries. Other socio-economic variables such as urbanization level and women's work are rather similar in both countries, and are relatively unimportant in explaining the fertility differential.

Fertility level varies widely across Muslim countries, and wide variations in fertility also exist within country. Although Bangladesh and Pakistan are both classified as having low human development countries, the former achieved lower fertility mainly due to wider spread of family planning. Marriage postponement is less prominent in explaining fertility decline in both countries as majority of women still married young. Improving women's status, in particular their educational level, will have significant effect in reducing fertility among the lower socio-economic groups in the less developed countries.

P0112

The Anomaly of Declining Infant Mortality but Continuing High Fertility: The Case of Nanggroe Aceh Darussalam, Indonesia

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It is observed that low infant mortality is associated with low fertility in most populations, but the demography of Nanggroe Aceh Darussalam (NAD or Aceh) province, Indonesia does not display this association. This province has experienced a substantial decline in its infant mortality over time, but continues to have a comparatively high fertility at above replacement level. The aim of this paper is to address this anomaly. The paper analyses the effects of the proximate determinants of fertility to identify the factors that influenced the causation of the anomaly and examines whether socio-cultural factors in Aceh have any role in creating it. The findings reveal that marriage has the largest effect in determining the level of total fertility rate, followed by contraceptive use and breastfeeding which have weaker effects on fertility in Aceh. Education is the most significant of the socio-economic factors in determining the levels of both fertility and child mortality in Aceh. The analysis has also revealed that age at first marriage has a significant influence on mothers' experience of child death. Further, women's education has been found to significantly affect at age first marriage. Sex preference of future children is significantly related with the use contraception. Finally, women living in urban areas are found to be more likely to shorten the duration of their breastfeeding, which is likely to increase fertility. The socio-cultural changes and special circumstances that occurred in Aceh between 1997 and 2007 have influenced the reproductive behaviour of women of this province. Most women and men in Aceh desire to stop childbearing only when they have four living children, which is in contrast to the situation in Indonesia as a whole where most women and men want no more children after having only two living children. The military conflict in 1989-1998 and the *tsunami* of 2004 are believed to have affected the socio-cultural situation of Aceh, creating a condition that caused this anomaly in demographic performance. All these social changes may have influenced reproductive behaviour change of the Acehnese people. This study suggests the need of further research to assess the factors responsible for increasing the desired number of children among reproductive age couples in Aceh. It is necessary to maintain a high level of education among women to keep them getting married at 20 years or older in order to maintain a low level of fertility rate on one hand, and to support the low level of child mortality on the other.

P0113

Estimates and Determinants of Wanted and Unwanted Fertility Estimates in North-East India

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Births born to women who are otherwise reported as unwanted constitute a substantial proportion of all births in developing nations of the world. Reducing the level of unwanted births has important social, health and demographic consequences. In this paper, levels of wanted and unwanted fertility are estimated using data from NFHS-3 (2005-06) in the eight North-East states of India including Sikkim. The conventional method of estimation is first employed and then another method based on Period parity progression ratio is used. The results are then compared from the two methods. The conventional method employed here is based on the wantedness of the last child born during the three years preceding the survey. The other measure is based on actual and wanted period parity progression ratios. In this paper the levels of unwanted fertility among various socio-economic and demographic groups has also been studied across the states. The wantedness of the last child is being explained through various covariates via a logistic regression model.

The North-east Region of India comprising of eight states viz. Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura, shares a significant proportion of population in India's total population. The region has a varied socio-cultural and economic activities and has a distinct topographical features from the mainland India. In the eight states of North-East India, unwanted fertility constitutes about 14% of the total births in the whole region. If all unwanted fertility is eliminated in the region, the TFR in the region would have been 2.42 instead of 2.81 (2005-06).

The states of Arunachal Pradesh, Assam and Tripura reported the lowest proportion of unwanted fertility ranging from 8 - 10%. Meghalaya, Mizoram and Sikkim reported unwanted fertility in the range of 11 - 15% whereas Manipur and Nagaland reported highest proportion in the range of 18 - 20%. These results show that states with moderate levels of fertility shows higher proportion of unwanted fertility than those with high or low levels of fertility. The results are more or less consistent with other states of India.

Results of multivariable logistic regression analysis shows that rural women reported more unwanted last births than urban women. The wantedness of last birth is reported more by women with higher educational level than those with less educated or illiterate women. Poorer women reported more unwanted births than rich and richer women. Muslim women reported more unwanted births than Hindu women whereas women belonging to Christian and other religious groups reported more wantedness of the last birth than the Hindu women. Husband's education does not play a significant role with regard to wantedness of the last birth.

Key Words: Unwanted fertility, Period Parity Progression Ratio, NFHS-3, TFR, logistic regression.

P0117

High Fertility Rate in Timor-Leste on a Downward Trend

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The total fertility rate is still high in Timor-Leste but has started to decline according to the results of 2009 DHS and 2010 census. According to DHS, TFR was 7.4 in 2003 among the ever married women and reduced to 5.7 among all women within reproductive age in 2009. The fall is reported by censuses; 7.0 in 2004 to 6.2 in 2010. When indirect methods of estimating fertility are used, the estimates range between 6.0 and 7.4 in 2010. Nevertheless, all indirect method results give the same conclusions that although fertility is declining in Timor-Leste it is still high and declining with a slow tempo.

Fertility trend analysis, according to own-children method, shows that total fertility rates fluctuated largely at the beginning of the 1995-2010. The peak and trough movement slows down after 2000-2001. The sign of long-term fertility decline started in 2002. Younger cohorts are more likely to reduce fertility.

Results of fertility differential analysis show that fertility varies according to the socio-economic background characteristics of women. Fertility is higher among women who live in rural areas, are illiterate in Tetun or Bahasa Indonesia, are less educated, are economically inactive, have worse quality of housing, have some livestock, and have crops. However, complete fertility less differs than period fertility, indicating the predominance of traditional family values that resiliently and equally pushes couples to have a large number of children.

Results of fertility spatial distribution analysis show that fertility still varies from a relatively high to high fertility with a small variation across districts. The total fertility rate varies from a lowest of 4.6 children per woman in Dili and to a highest of 7.2 children per woman in Ainaro. Only District of Dili and Covalima have a total fertility level of less than five children per woman.

Age at first marriage is relatively high in Timor-Leste, a factor that should have seen fertility level decline. The singulate mean age at marriage is 25.8 years nationally. It is higher among males, higher in urban areas, highest in Dili district, lowest in Viqueque district.

Political and socioeconomic development in the last decade is certainly bringing changes in fertility and nuptiality behavior in Timor-Leste. Some of the factors responsible for the decline are increased use of contraceptive methods, reduced infant mortality rates and increased age at first marriage. It should be recommended to improve access to services, communication, information and education services that help individuals to plan their marriage lives and help families to decide the number of children and how to achieve their reproductive goals.

P0118

Explaining Fertility in India: A Geo-spatial Analysis

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Studies examining the intricate interplay between poverty, female literacy, son preference, child mortality, childlessness and fertility are rare in the Indian demographic literature. Using data from the most recent round of District Level Household Survey conducted in 2007-08, we explore four important research questions - 1) whether the geographic regions that have higher childlessness have lower fertility; 2) whether the geographic regions that have higher child mortality also have higher fertility; 3) whether the geographic regions that have higher son-preference also have higher fertility; 4) whether the geographic regions that have higher poverty also have higher fertility.

To address these research questions we divide India into 85 geographic regions that are homogeneous within and heterogeneous between following the Census of India categorization. The outcome variable (fertility measure) and exposure variables were estimated for each of the 85 geographic regions using appropriate techniques. We use a number of geo-spatial techniques - including Moran I, Bivariate LISA, and spatial error model to investigate the aforementioned research questions. We also use two-stage least squares to examine the association between fertility and child mortality in India. The preliminary analysis is carried out in *ArC GIS*. The maps prepared in *ArC GIS* are then exported to *Geoda* for detailed statistical analysis. Finally, the two-stage least squares are carried out in STATA 11.0.

The outcome variables include child woman ratio (CWR) and mean children ever born to women in the age-group 40-49 (MCEB) generated separately for the 85 geographic regions of India. The exposure variables include - percent of childless woman (based on definition given by WHO), mortality of children in age-group 1-3 years, indicator of son preference, poverty, and other important socio-economic and demographic variables.

The analysis is in progress and the results are likely to be available soon.

P0120

Knowledge and Use of Contraceptive among Married Males of Eight Northeast States of India

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Socioeconomic characteristics and knowledge about family planning methods play a very important role in the use of contraceptives. This paper examine the linkage between the socioeconomic characteristics with the contraceptive use among married men of north east states of India. Family planning programme in India have been mainly directed towards women. However, because north east states remain a patriarchal society, men at present continue to determine familial fertility and contraceptive use decisions. Consequently, at least for time period relevant for current polity planning purposes, the willingness of husbands to adopt or allow their spouses to use family planning practices will determine the pace of fertility reduction in north east states. The present studies relies on third National Family Health Survey (NFHS-3). It was conducted in 2005-06. It collect information from a nationally representative sample of 124,385 women age 15-49 and 78,369 men age 15-54 in 109,041 households. The analysis has been carried out separately for currently married men in Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Sikkim. The major techniques used for analysis are bivariate and multivariate statistical methods to see the cross linkages between the dependent and independent variables. The result suggest that there is high knowledge of family planning. Various literatures have shown the overall use of contraceptive is mostly determine by sterilisation in most states of India as well as developing countries. Therefore the analysis has been carried out separately for permanent method and temporary method. The trend in north east states show that the use of temporary methods are more popular than sterilisation. The logistic regression has been carried out for contraceptive use, sterilisation and temporary method controlling for various socio-economic and demographic factors. The age of men, education, wealth status and desire for children have significant effect on the contraceptive use in most of the north east states. On the use of sterilisation higher age is the most important factor and is less use among educated married men. The use of temporary method shows contradiction with sterilisation. Thus, since knowledge of contraceptive is already high among even those respondents who do not use contraceptives, the attitudes of men are important for decisions about contraceptive use. As a result, family planning programs that continue to focus solely on women will continue to achieve only limited successes in north east states likely in many patriarchal societies.

P0121

Determinants of Third Birth Interval in Bangladesh: An Application of Discrete Time Hazard Model

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The two-child norm is popular among women in Bangladesh. Most of the women in Bangladesh prefer to have at least two children. The women who proceed to higher order births mainly constitute a selected group in Bangladesh. In this context, the aim of this study is to find out the summary measures of the third birth interval and to observe the third birth intensities by different selected socio-demographic characteristics by using Bangladesh Demographic and Health Survey (BDHS) data. In this study, the quantum and tempo dimension of fertility has been observed by Kaplan-Meier birth function. The failure time model, the discrete time hazard model have been applied to third birth interval data. The quantum and tempo dimension varies according to different socio-demographic characteristics. The result exhibits that 62 percent of the two children mothers have had a third birth within 5 years of their second birth. The median duration of the third birth interval is 29.5 months and the Trimean measure is 30 months for women in Bangladesh. It has been observed that the cumulative proportions of women having third birth systematically decrease with increasing age at second birth. Women who have given second birth at ages less than 20 years is about 2 times higher than that of the women who have had their second child at age 30 years and over. The proportion of third birth remarkably decreases by increasing educational status of women. The majority of women who have given third birth are apparently are the lowest educated women in Bangladesh. The sex composition of the previous children has a higher influence on progression than in the transition to second parity. Women who have had ‘one male and one female' children have the lowest transition risk. A woman who is sonless with two children, the risk of having a third birth is higher than that of women with two sons. The women who have lost their first child at their second birth have 2.1 times higher risks of third birth intensities than women whose first child is alive. The propensity to give a third birth is 1.2 times higher among Muslim women than their non-Muslim counterparts.

P0122

Revelation of Convergent Fertility Desire among Different Groups to adjustment of Fertility Policy----Based on the Surveys in Beijing of China

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It is over 30 years that strict fertility policy have been carried through in China. There have been lower levels of fertility and reproduction among the population in China. In 2010, Chinese Total Fertility Ratio (TFR) is about 1.6 and it is ever lower than 1 in more developed areas such as Beijing, Shanghai and etc. It is time to adjust the fertility policy. In fact, some fertility policies have been amended in some Chinese provinces in recent years such as single-only-child families are allowed to have second child in rural areas. The author indicate no approve attitude to those adjustment and think it will enlarge gap between urban and rural areas and is not benefit for Chinese future developing. Fertility level of a population is an aggregated outcome of individuals fertility behaviors which are in turn determined by their fertility intentions. Based on the 2008 and 2011 surveys in Beijing, the subjects belonging to four groups that are urban registered residents, rural registered residents, urban to urban floating population and rural to urban floating population, this article made a comparative research on fertility desire of the young people including the ideal child number, gender preference and influence factor in fertility intension. The main results are following:

1. The average number of ideal children of four groups all are lower than 1.6. Most registered residents and urban-urban floating population subjects prefer to have one child.
2. Only minority of registered residents and urban floating population make certain and want to have second child if the policy permit while the majority of floating population from rural areas want to the second child.
3. There are no son preference in Beijing subjects whatever they are from urban or rural areas.
4. The subjects from four groups all think that income and fertility policy are the top 2 influence factors on childbearing decisions and show the economic condition is the most influence factor in fertility intension.

Based the results, the article draw the conclusions that fertility intention between urban and rural population is becoming similar in Chinese developed area such as Beijing.The majority of young people tend to have only one child. The situation shows a trend towards a low birth rate in the future. If the situation is continuing for a long time , China will have to take on a huge aging group soon and faced to a rapidly declining labor force. Therefore, this article suggests that local government in Chinese developed areas should adjust only-child policy to two-child in the near future and enforce the same fertility policy in urban and rural areas.

P0125

Mean Closed Birth Interval Estimation and Birth Averted Due to Lactational Infecundability

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For developing countries, high maternal mortality rate (MMR) and high infant mortality rate (IMR) are still big challenges, because MMR and IMR are mainly associated with the close birth intervals. Previously it has been found that where the duration of births between two consecutive births is too low, child and mother Health are found poor. Also previous studies estimated the mean birth interval based on adjustment factor, Mathematical Modeling based on fitting on Demographic Data. These models are quite reliable but not for the small geographical area. Thus in this study a flexible and reliable method has been proposed to estimate mean closed birth interval (MCBI) and its applications to find birth averted due to breast feeding practices for all major states of India. Replacement of breast feeding practices of females to the use of contraceptives with some effectiveness is also studied. Here the study has been done for estimated proportion of current contraceptive users for spacing with certain effectiveness which is necessary if females are not practicing breast feeding to reach the estimated MCBI. This method will also provide the use of contraception for attaining desirable mean closed birth interval with some effectiveness very efficiently for particular region.

Data from the 3rd round of the National Family Health Survey is used to estimating the mean closed birth interval for major states of India. A simple multivariate linear regression analysis has been done for estimating MCBI with the help of dependent variables which are highly correlated with MCBI.

The estimate the MCBI for State level Females are quite reliable. This model explains approximately 70% of the variation of the MCBI. Some states like Bihar, Rajasthan shows high risk and Kerala and West Bengal shows low risk of MMR and IMR. Punjab and Delhi show low lactational infecundability. Andhra Pradesh and Karnataka show high lactational infecundability. Maximum 50% births are averted due to lactational infecundability in Karnataka.

The studies provide better estimates for MCBI and births averted due to breast feeding practices at small geographical region. This method will also provide the use of contraception for attaining desirable mean closed birth interval with some effectiveness very efficiently for particular region.

P0127

Does Frequency and Intensity of Breastfeeding Affect the Length of Postpartum Amenorrhea: Evidence from a Survey Data?

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A number of attempts have been made to establish that there is a positive association between the durations of breastfeeding and postpartum amenorrhea (PPA) within a population or across populations and relatively few attempts are made to establish the association between the intensity of breastfeeding and the return to menses within a population. It is in this context, it was felt appropriate to examine the effect of the frequency of breastfeeding on the length of postpartum amenorrhea with the specific hypothesis that night-time breastfeeding is significantly and positively associated with the return of menses; an increase in the number of night-time breastfeeding leads to an increase in the duration of postpartum amenorrhea. Also hypothesis that the duration of PPA varies within a population in the context of frequency of breastfeeding practices along with selected socio-economic variables.

The study used National Family Health Survey data and information on the frequency of breastfeeding along with the duration of breastfeeding, and the socio-economic background variables. The intensity of breastfeeding is measured by two variables i.e., the number of day-time feeds per day and number of feeds per night. The Simple life table technique and multivariate hazard model technique has been used to study the determinants of postpartum amenorrhea where frequency of day-time and night-time nursing are two fixed covariates.

The results show that low intensity of night-time breastfeeding significantly increases the risk of return to menses. Further, multivariate models reveal that the rate of returning menses varies significantly by mother's place of residence, education level, religion and caste, and household SLI. However, low intensity of night-time breastfeeding has a statistically significant effect on the return of menses. It is also evident that women from Scheduled Tribe group, low and medium level SLI households have longer length of postpartum amenorrhea. It may be due to prolong night-time nursing among such sub-groups or from low socio economic strata may not produce sufficient milk due to the poor nutritional dietary intake, thus resulting in longer suckling by hungrier infants. After controlling for interaction variables along with other socio-economic variables, women from low or medium SLI are found to have a negative effect on the return to menses. This model shows a significant effect on the length of postpartum duration even with the level of woman's education which also shows a negative significant effect on the return to menses.

Findings have clearly demonstrated the significant effect of various socio-economic and bio-demographic factors on the duration of PPA. There is a significant association between low frequency of night-time breastfeeding and early return of menses.

P0128

Unintended Pregnancy among Rural Women in Bangladesh

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Pregnancy and child bearing is one of the very desired and happy events in a woman's life, but mostly in the developing or underdeveloped countries it has been a fact that does not depend on their own choice. Each year about 184 million pregnancies in the world occur in the developing countries and 40 percent of them are unintended. In Bangladesh, 29 percent of pregnancies were unintended (with 15 percent mistimed and 14 percent unwanted). Considering the gravity of the situation and its consequences, this paper aims to explore the prevalence and to reveal the scenario in relation to unintended pregnancy of women in rural Bangladesh. Total 3301 women were interviewed from 12 sub-districts of Bangladesh. Face to face interviews were conducted using a structured questionnaire.

Findings reveal that, about 29 percent of the pregnancies were unintended. It show**e**d that, women's intention of pregnancy was negatively related to age. So, unintended pregnancy increased with age. Among the unintended pregnant women, 66 percent had had 4 or more children and about 11 percent women had no child or only one child. The study also confirmed that women's pregnancy intention depends on their socio-economic status. The unintended pregnancy rate was two times higher among women of lowest quintile than highest quintile (37% vs. 18%). Result also revealed that, unintended pregnancy gradually decreased with the educational attainment increased. It was found that the unintended pregnancy rate was quite high (42%) among women who never attended school. On the contrary, this proportion was only 14 percent among better educated (higher than secondary education) women. Unintended pregnancy was found higher in women who were not exposed to any mass media than who were exposed to mass media (34% vs. 24%). Findings also revealed that, 41 percent women did not use any kind of contraceptive methods before their last delivery. Among them about one fourth (23%) women experienced unintended pregnancy. On the other hand, despite a large number of women (59%) used contraceptive, but still many of them (33%) experienced unintended pregnancy. So, not only unmet need for family planning method and accessibility to FP method but also discontinuation of FP method or to use these incorrectly was other factor for unintended pregnancy.

It was found that, unintended pregnancies are a consequence of multiple factors, including socio-economic and demographic as well as reproductive health service utilization. So, extensive behavior change communication activities are essential to reduce the rate of unintended pregnancy for controlling population.

P0129

Adolescent Fertility in India: Levels, Trends and Patterns and Programmatic Needs

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Childbearing at younger age remains a daunting challenge to programme managers in both the developing and the developed world. However, with enervate health services, its consequences are exacerbating in developing world. It is well established that childbearing at younger ages poses additional risks to mother and child, and thus, a major challenge to achieve MDGs 4 and 5. This paper tries to understand levels and patterns in adolescent fertility in India and its major states. The paper also explores age at marriage, awareness, utilization, unmet need, intention to use family planning methods and timing to have first child among young recently married women and their interaction and contact with the grass root level health workers. To meet the objectives, fertility estimates available from the SRS will be analyzed. In the second level analysis, unit level data from the nationwide district level household survey (2007-08) have been used only for high focused states. The DLHS (2007-09) survey has information about 39,164 ever married women.

Analysis of the fertility estimates from SRS reveals that in absolute term adolescent fertility has declined in all the major states with the national average of 29 birth per thousand adolescent women between 1981 and 2009. The decline ranges from 79 births per thousand women in Madhya Pradesh to six births per thousand women in Punjab. The adolescent marital fertility, a true indicator to assess programme impact, shows slower reduction at the national (22 percent) level and state level than decline in adolescent fertility. Contrarily, in Bihar (10 points), Gujarat (80 points), Haryana, Madhya Pradesh, Punjab and Uttar Pradesh, adolescent marital fertility has rather increased during 1986-2009. The findings reveals that about 28 percent currently women aged 15-19 years were in unmet need for contraception, majority of them for spacing methods (26 percent). Only seven percent adolescent women were using modern contraceptive methods at the national level. At the national level, about 83 percent women (15-19) discontinued contraceptive use for having a child sooner. Those adolescent women who discontinued contraceptive methods, 20 percent of them cited supply, side-effects, inconvenience, and opposition from husband/family as reasons for discontinuation. More than one-third of women aged 15-19 years were found to be in unmet need for spacing methods of family planning in Bihar, Jharkhand and Uttar Pradesh. Multivariate logistic regression analysis indicates that education, household wealth status, exposure to mass media, husband education, and geographical region had significant influence on using modern contraceptive methods among adolescents married women aged 15-19 years. In the final version of this paper, we intent to focus on programmatic needs at the grass root level such introducting family life education approach to adolescent girls in India.

P0130

Wanted Fertility, Unwanted Fertility and Fertility Decline in Maharashtra

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This paper has examined the total wanted fertility rate, total unwanted fertility rate and fertility decline in the context of background characteristics. The analysis revealed that total wanted fertility rate, total unwanted fertility rate and fertility is declined in Maharashtra and it is higher in rural area as compared to urban area. The total wanted fertility rate and total unwanted fertility rate is declined by half child in Maharashtra and it is highest among illiterate, Muslim women and ST women. Overall, total wanted fertility rate and total unwanted fertility rate decreases by education. The Muslim women are significantly more likely to unwanted fertility and less likely to have wanted fertility. The TFR by religion is highest among women from Muslim religion. The scheduled castes/scheduled tribes have exhibited higher fertility than other backward class and other castes and fertility differentials exist in Maharashtra. Overall, total wanted fertility rate, total unwanted fertility rate and total fertility rate is declined by residence, education, religion and caste/tribe during the study period. The data for the present paper has been compiled and analyzed from NFHS-1, NFHS-2 and NFHS-3 in the state of Maharashtra. The bi-variate analysis has been done by calculating rates to study the levels and trends in wanted fertility, unwanted fertility and fertility decline in Maharashtra. The total fertility rate and total wanted fertility rate is compiled from NFHS-1, NFHS-2 and NFHS-3 reports of Maharashtra. The total unwanted fertility rate is calculated by subtracting total wanted fertility rate from total fertility rate. The logistic regression analysis has been done to see the effect of different socio-economic variables/factors on wanted and unwanted fertility.

P0131

An Analysis of Fertility Decline in India: Evidences from Tamil Nadu and Uttar Pradesh

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Using data from census of India and sample registration system, this paper traces fertility transition of Uttar Pradesh and Tamil Nadu and explains the fertility decline among the women of different age groups. There exist considerable regional disparities in terms of fertility decline in northern and southern states. The pace of fertility decline has been faster in southern and coastal regions, and at a slow pace in backward northern state. In Tamil Nadu fertility declined substantially among the women of lower and higher age groups in comparison to Uttar Pradesh characterized by low literacy, low female age at marriage, poor health infrastructure and low status of women.

P0134

The Critical Challenge of Maternal and Child Health Survey in Surmang Dutsi-til of Yushu Tibetan Autonomous Prefecture of China

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This is a discriptive paper aims at revealing the lately level and demand of maternal and child health of Tibetan region in China, by using the data from a sampling survey conducted in 2009 at the Surmand Dutsi-til, Yushu Tibetan Autonomous Prefecture, Qinghai Province, a remote area of China. The survey result reveals that most of the Tibetan women still have home birth nowadays (89.1%) and half of them (47.2%) did not take prenatal examination or just once (35%). By using retrospective method on the respondents, 1.6% of sample household report cases of maternal mortality found over past 2 years during the survey. Base on small number of samples, the maternal mortality rate is roughly estimated at 1600 per hundred thousand. Even though the underestimation of retrospective method due to missing report or concealing, the level is sufficiently high and challenging in comparison with the standard of MDG.

The condition of child health is challenging as well. The ratio between total number of deceased infants and that of women of childbearing age is 144 per thousand in Surmang Dutsi-til, within the deceased infants, 62.5% past away within 24 hoursof delivery.

In respect of the critical challenge of the perinatal health, small scale peer education and training is promoting within the community. Yet, the constrain of the medical resources is the main obstacle in such remote area.

Keywords: maternal mortality child health Tibetan remote

P0135

Measuring Social Interaction Effects to Examine Fertility Preferences and Contraceptive Method Choice among Women in Rural Uttar Pradesh, India

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Uttar Pradesh continues to remain the most populous state of India in the 21st century. Although fertility has declined across several Indian states of late, with varying historical points of onset and pace of decline, women in Uttar Pradesh on average, still bear around four children in their reproductive lifetime due to the interplay of a complex set of socio-economic, demographic and cultural factors. However, little attempt has been made in the past to examine the role of diffusion, aside from the standard set of socioeconomic factors in influencing fertility change in the Indian context in general, and Uttar Pradesh in particular. Understanding the mechanism of diffusion perspective in precipitating fertility change may be crucial from a policy perspective.

This paper examines how a social interaction, defined as informal-interpersonal communications, influences fertility preferences and contraceptive method choice among women in Uttar Pradesh.

The present paper is based on the primary data collected from Jaunpur district, situated in the eastern part of Uttar Pradesh, primarily as part of the doctoral work. The study employed the mixed-method approach for data collection. Semi-structured schedules were canvassed to collect information related to ego-centric social network, reproductive histories and contraceptive behaviour of around 570 currently married women in the age group of 18-35 years. Bivariate and multivariate techniques were employed for data analysis.

Preliminary findings suggest that social interaction appears to be a significant predictor of contraceptive method use among women in rural Uttar Pradesh after adjusting for pertinent socio-economic and demographic covariates. Social learning emerged as an important mechanism through which women learn about the cost and benefits of small family size, side-effects associated with various methods and potential avenues of seeking family planning methods.

P0140

Does Economic Status Affects Fertility Decline? Comparative Study of Two Lowest Fertility States Kerala and Tamil Nadu

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There is a plenty literature related to fertility decline in India and its states which mainly focused on identification of the factors associated with different indices of fertility. Among other important socioeconomic and demographic factors, the most influential determinant of fertility decline that emerged from the previous study is the region of residence. The decline in fertility is more prominent in the southern regions in comparison to other regions of India. In this regard the next step is how much change in fertility in lowest fertility states like Kerala (2.49 mean children ever born) and Tamil Nadu (2.80 mean children ever born) could be attributed because of household wealth index apart from other explanatory factors is remains unanswered. This could be the important issue for policy point of view. In the present study the research hypothesis is that economic status of the household is the main factor of fertility decline although there is still debate about which are the predominant factors? With the help of decomposition analysis by using data from National Family Health Survey, 1992-93 and 2005-06 we will quantify the role of each independent covariate. So, an attempt has been made to examine the contribution of each selected covariate to the overall decline in fertility of Kerala and Tamil Nadu states, with the help of decomposition analysis. A decomposition analysis based on Poisson regression reveals that in both the states propensity component explained more than 50 percent of the total change in fertility. Number of living sons and daughters, women's education and contraceptive use contributed significantly in overall declining the fertility. More specifically, women belong to medium and upper wealth quintiles, educated women contributed more in overall declining the fertility. Moreover, composition component contributed around 30 percent of the total change, that is, increased in the proportion of better educated women and those who were not experienced child loss contributed substantially to the aggregate decline in fertility during thirteen year time period. The significant contribution of economic status and women education in declining fertility focus the need for efforts to enhance women education.

P0141

Intergenerational Effects on Ideal and Intended Family Size

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Studies have found that there are intergenerational effects on childbearing preference and behavior in different ways. This paper will exam number of siblings of parents and parent-in-laws on the ideal and intended family size of young women in Jiangsu Province, China, using data from Jiangsu Fertility Intention and Behavior Study (JFIBS) 2010 follow-up survey. With a life course learning assumption, both ideal and intended family size will be both influenced by the number of siblings of parents, number of a woman's own siblings, as well as the woman's experience of family formation and childrearing. Number of parents-in-law's siblings and husbands' siblings may play some roles on married women with one child. Although the difference on preferred number of children is mainly one or two, the intergenerational effects are significant after controlled for other important variables.

P0142

Reproductive Desire Of One-child Family - Based On A Fertility Survey of 3 Provinces In China

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With a perspective of Sequential Decision Model, this article compares reproductive desire between one-boy-family and one-girl-family based on sample survey data of rural women from 3 provinces, as well as utilizes Binary Logistic Regression Model to analyze the factors which influences reproductive desire. The results show no difference between one-boy-family and one-girl-family in disired quanlity of marginal child while huge difference in disired sex. "One Boy and One Girl" is still the ideal children structure for rural women. From the modeling Culture perspective speaks louder than the typical Cost-Utiliy framework

P0145

Economic Crisis and Very Low Fertility in Korea: Focusing on the Theory of Intergenerational Wealth Flows

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This study aims to examine the cause of very low fertility in South Korea after 2000s, focusing on the theory of intergenerational wealth flows and changes in life cycle. Theory of intergenerational wealth flows which related to fertility transition means wealth flows existing between parent generation and children generation. It can be divided into two features net upward wealth flows and net downward wealth flows.

Unlike other countries, South Korea has been experiencing those two features at the same time thanks to generation only existing in South Korea. They take responsibility of affording their parents and children simultaneously. The more shares are fallen to them, especially when it comes to rearing expanses which even include university tuition and marriage expanses. This social phenomenon has overburden to generation.

Late 1990s economic crisis led generation to go through harsher economic hardship which was triggered by an increase in ‘social aging period' through early retirement and unstable employment status. It made children generation postpone their marriage and fertility due to decrease in net downward wealth flows. Therefore, children generation has been forced to change their idea of marriage or having children. This brought about South Korea very low fertility nation.

P0146

The Influence of Migration on Fertility in DKI Jakarta

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This study aims to examine the influence of migration on fertility and also to test the impact of socio-economic and demographic factors on fertility by migration status in DKI Jakarta. This study uses the 2005 SUPAS data of ever married women aged 15 years and older. The analysis is conducted by using Multinomial Logistic Regression method and the Analysis of Variance (Anova).

The results show that the level of migrant fertility almost similar to the level of non migrant fertility. The average number of the children ever born for migrants is lower than for non migrants, which are 2.44 and 2.53. However, the difference between migrants and non migrants is found for the tendency of having a specific number of children. Migrants have higher tendency than non migrants to have 2-3 children while non migrants have higher tendency than migrants to have 1 or 4 or more children. It is also found that migration significantly influences fertility of women to have four or more children. Migrants are less likely (0.59 times) than non migrants to have four or more children than to have no children. On the other hand, it is found that there is influence of socio-economic and demographic factors on fertility by migration status. Age and the status of contraceptive use have positive influence on fertility, while work status and the age at first marriage have negative influence on fertility. The level of education have two opposite effects on fertility. It positively influences fertility of women to have one up to three children, while it negatively influences fertility of women that have four or more children.

P0147

Intention of Second Childbirth in Korean Late Marriage Women Who Have One Child

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The purpose of this study was to describe the factors that affect the decision to have a second child in late marriage women who have one child. Korean married couples are pressed by cultural norm that they must have at least one child. In this context, this study sees childbirth as being decided by individual choice and considers an intention of second childbirth as the ultimate research topic. Also, in these days, the Korean females tend to postpone their marriage, and this women's late marriage affect the rapid fertility decline in Korea. Therefore, this study considers the subject of this research to late marriage women who have one child.

This study attempted to examine the factors that affect the intention of second childbirth. To do this, in depth interviews were carried out on late marriage women who have one child. On the basis of this interview, quantitative analysis was carried out through applying the data on the ‘2009 National Survey on Marriage and Fertility Dynamics' to the regression models.

As a result, not only age but also experiences that do housework and raise a child appear to affect intention of second childbirth in late marriage women who have one child. In other words, late marriage women consider second childbirth if they with positive awareness on experiences that do housework and raise a child. In contrast, it was discovered that socio-economic status, ‘values regarding children', the size of family or ‘preference for male offspring', which in precedent studies had been considered as the major factors of childbirth, were not factors.

In summary, it is possible to identify through this study, that the intention of second childbirth are the result of an awareness on experiences that do housework and raise a child. From the results of this study, the following political suggestions can be made. Many barriers of experiences that do housework and raise a child should be eliminated and environmental condition of late marriage women should be improved. The policy interventions for childbirth of late marriage women are very important because the fact that late marriage is the major factor of low fertility is proven empirically. As a result, an improving the environmental condition for housework and raising a child is to be encouraged in women who have one child.

P0148

China's Fertility Patterns Against a Low Fertility Background

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After the first and second fertility transition, China has now become a member of the countries with low fertility. It is universally acknowledged that China's Total Fertility Rate (TFR) is very low although no agreements have been reached on the real TFR of China. What I have to point out is that a similarly low TFR doesn't necessarily indicate either analogical social economic conditions or similar reproductive behaviors compared with foreign countries. Conversely, behind the similar low fertility, China has a unique fertility structure, of which the determinants also differ pretty much from other countries. Through comparing marriage rate, fertility level, children parity distribution, reproductive time, proportion of extramarital births and sex ratio at birth (SRB) of China and other low fertility countries - America, Russia, Sweden, Italy, France, Japan and South Korea, this paper tries to disclose China's fertility patterns and analyze the factors which contributes to the particular characteristics.

Domestic data sources include several fertility surveys, census and sampling surveys, like ***the national birth control analysis of sampling survey data volume***, 1990 and 2000 census data. Overseas data are from America and Japan's statistics bureau website, some books on population development like ***Country Profiles about Fertility***. Present research papers are also part of the data sources.

The results of the analysis show that China's fertility patterns are characterized by: (1) The proportion of women choosing to be unmarried and not bear kids is very low. The total first marriage rate fluctuates between 0.8 and 1.1, compared to 0.5 in Sweden, 0.6 in France etc. And the proportion of having no children is less than 1% in China; (2) The proportion of women having two or more children is rather low especially in urban areas. By contrast, in those low fertility countries, both the proportion of having no children and that of having high parity children are relatively high; (3) Chinese women's mean age of first childbearing is lower than that of the developed countries. Specifically, that age in China is 24.09 in 2005, while it is surpassing 28, even higher than 30 in many developed countries; (4)The ratio of extramarital birth is considerably low as well. Extramarital births cannot be accepted in China, while in some low fertility countries the ratio is very high, some even exceed 50%; (5)With apparent son preference, SRB of China departed from the normal level in the later 1980s and remained high ever since, which is a unique phenomenon confronted China during the fertility transition.

The paper's last part digs further in the factors which determine China's fertility patterns, including family planning policy, societal and economic development and culture ambience.

P0203

Determinants of Unintended Pregnancy among Married Women in Indonesia

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Despite increases in contraceptive prevalence and declines in the fertility rate, many women in Indonesia, where induced abortion is illegal, still experience unintended pregnancies. In these circumstances, it is important to identify determinants of unintended pregnancy to assist policy makers and planners in designing programmes and services targeted to those women who have the highest likelihood of having an unintended pregnancy. This study analyses the determinants of mistimed, unwanted, and unintended pregnancy among married women in Indonesia.

Data for this study were obtained from the 2007 IDHS. Among women respondents of the 2007 IDHS, 15.127 had at least one birth during five years preceding the survey date. These women were asked the planning status of the most recent birth; whether the birth was mistimed, unwanted or was born according to plan. This study used bivariate tables and multivariate logistic regression to investigate the relationship between women's pregnancy intention status and a number of socio-demographic variables. SPSS 17.0 was used to analyze the data.

Of the 15,127 births, 19.9% were classified as unintended consisting of 11.9% mistimed and 8.0% unwanted. Findings of this research confirmed that length of preceding birth interval was the most significant determinant of why respondents regard their pregnancy as mistimed. Maternal age ranked as second most significant, educational attainment of mother was third and parity was on fourth. On the other hand, parity was the strongest factor explaining why women regard their pregnancy as unwanted. Maternal age ranked as second most influential determinant and length of preceding birth interval was third. In general, unintended pregnancies occur among all populations of Indonesian women, but the occurrence is reasonably more prevalent in several particular groups : women with pregnancies that come too soon after previous birth, women with many children, women who disagree with their husband about their family size, poorer women, and older women.

The incidence of unintended pregnancies across the different demographic and socio-economic circumstances of the Indonesian women varies considerably but remains a widespread problem. It is quite clear that all over the country, the rate of unintended pregnancies both mistimed and unwanted is still quite high and needs to be given special consideration. There is a crucial need for decisive action on the part of the Government. Resolution of the issues of unintended pregnancies will have a positive cost-benefit for families that will enhance self sufficiency among individual families and the general wellbeing of the population. As such, the target should be: "all pregnancies must be carefully planned" and the reduction and possible elimination of unintended pregnancies should be a priority programme.

P0205

Youth Sexual Behaviour Determinants in Ethiopia: Emerging Challenges

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The younger generation is a powerful source of future economic prosperity. Today in Ethiopia, however, young people live differently than their parents and grandparents did. Large numbers of young people are homeless. In such a context, focusing on youth sexual and reproductive behaviour is an extraordinary challenge.

The data used in this study are from the 2005 Ethiopian Demographic and Health Survey (EDHS). The analysis concerns a population of 5813 females and 2399 males aged 15-24 years from all regions of Ethiopia. A logistic regression model was adopted as a method of statistically analyzing this population in three separate groups, those aged 15-19 years, those aged 20-24 years and an overall age group of 15-24 years.

The study clearly shows that literate youths of the 15-19 year age group are 3.7 times more likely to use condoms than illiterate youths. Within the same age group, those who are presently sexually active have a 10 percent greater chance of using condoms than those who are not sexually active. Unwanted pregnancies have a 2.5 times greater chance of occurring among sexually active youths. People aged 20-24 years with an educated partner are 5.5 times more likely to use condoms during their first sexual experience than those with illiterate partners. The influence of the educational level of a young person's partner on his or her reproductive health is highly statistically significant ($p<0.001$).

The critical requirements for youths to preserve their sexual and reproductive health are education, good knowledge about sexual and reproductive health, self-confidence and access to reproductive health services. Providing for young people's sexual and other health needs is one of several important ways to enable the youth community to reach its full potential of creativity and to play its role as a builder of the future. A policy of rapid action is key in this domain.

P0206

Notions and Patterns of Risky Sexual Behaviours among Emerging Adults in Two Nigerian Tertiary Institutions

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Perceptions of personal vulnerability to sexually transmitted infections are often at considerable odds with sexual practices. In reality, this may not imply inadequate knowledge but could be associated with cultural beliefs and other complex psychosocial variables. This study explores the notions and prevailing patterns of risky sexual practices among emerging youths. Using a cross-sectional design, 450 structured questionnaires were administered among emerging youths (20-25years) in two Nigerian Tertiary institutions in Southwest Nigeria. This was supported with qualitative findings from two vignette based focus group discussion sessions held on gender basis with 21 participants. The findings showed a mean age of 24.7 and 22.5 years for males and females respectively. Risky sexual practices were widely reported to include indiscriminate indulgence in unprotected vaginal intercourse and anal sex for pleasure. Among the participants, 64.8% of the males and 96% of the females initiated sexual intercourse with their partners within the last month prior to this study. On the average, 1.90 of the males and 1.48 of the females had vaginal intercourse without using condoms within the last one month. Similarly, within the last month and three months prior to this study, the standard deviation of number of times unprotected vaginal intercourse was initiated by the females was 0.83 compared to that of the males (1.01). The qualitative findings among both groups revealed a high occurrence of unplanned sexual intercourse especially among those with multiple sex partners. Unplanned sexual intercourse was also associated with inconsistent use of condoms and the believe that 'opportunity comes but once'. However, on some occasions the use of condoms during intercourse with a regular sexual partner often gives different sensation which they do not relish. While a number of the emerging adults are aware of the implications of risky sexual practices, their continuous indulgence in such practice calls for more attention and a redesign of current behavioural modification approaches in Nigeria.

P0207

Experience of Violence among Deaf Girls in Ibadan, Nigeria

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Research exploring the prevalence and consequences of assault among women with disabilities is generally limited. Deaf individuals may be more likely to have a history of childhood sexual abuse than their hearing counterparts.

This study aimed at documenting the experience, prevalence and types of violence among deaf girls in Ibadan Nigeria.

Deaf girls were selected from all special schools and out-of-school settings using a combination of convenience and total sampling methods in Ibadan metropolis, Nigeria and their experience of violence documented. Pretested questionnaire was used for data collection and analysis done using descriptive statistics, chi square and logistic regression.

A total of 167 deaf girls were studied. Their mean age was 17.5±3.4 years and 87.4% had experienced at least one form of violence. Types of violence experienced included mental/psychological (34.2%); bullying (24.7%); physical (22.6%) and sexual (18.6%). Respondents who are out-of-school are more likely to suffer any type of violence compared with those who are in-school (OR= 1.2, C.I= 0.32 – 4.32) and those older than 16years are more likely to experience any type of violence than those younger than 16years (OR=1.4, C.I=0.55-3.69).

The deaf girls are not immune experiencing of violence. There is therefore the need for sensitization and preventive interventions targeting deaf girls to ameliorate the situation.

P0208

Tobacco Consumption during Pregnancy in Bangladesh: Level and Burden among Slum Women in Dhaka District

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The level of tobacco consumption has been increasing in Bangladesh, in particular the marginal class who are engaged in manual labour. Tobacco is responsible for more deaths than any other risk factors than high blood pressure. It also increases the burden of diseases during pregnancy and childbirth. A cross-sectional study of the 549 women from Dhaka district reveals that the use of tobacco *or tobacco products* during pregnancy was 10 percent, on an average. But there was significant difference of users *among* slum household*s*, older women with higher order of parity and illiterate women. There was significant difference in use of tobacco by settlement pattern. Forty percent women had tobacco habit from slum households compared to eight percent from the non-slum settlements. The multivariate analysis shows that the chance of complicated pregnancy including hemorrhage was higher for women who consumed tobacco during pregnancy or have tobacco chewing habit. *Utilization* of *medical* care during pregnancy had reduced the *likelihood* of tobacco consumption habit. Mothers with tobacco habits suffered multiple complications during pregnancy and delivery. The product limit method shows that the mean duration of illness during childbirth was higher for these women. To reduce the burden of tobacco, health education programme at the community level could be launched through preconception and prenatal care for the socially backward women in the slum areas.

P0209

Differentials in Receiving Information on Maternal and Child Care Practices: Evidences from NFHS-3

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The effectiveness of health care services depends on the tests, measurements and facilities provided as well as on the information/advice given to them for safe motherhood and child care. Most of the research on safe motherhood and child care practices is centered on the above mentioned former aspect of the health care services. However, little is known about the issue related to the information/advice given to women for their and their offspring's wellbeing as a part of health care services. Keeping this in mind, the objective of the present paper is to examine the differentials in receiving the information/advice on various maternal and child care practices in India and factors associated with them.

National Family and Health Survey-3 (NFHS-3) collected information on this aspect by asking women who receives antenatal care ‘whether they have received information on place of delivery and nutrition during pregnancy or not' as a part of ANC services. Further, information is also composed on ‘whether during pregnancy any health worker or health provider explained to them the importance of breast feeding immediately after birth, keeping baby warm immediately after delivery, cleanliness at the time of delivery, family planning'. Thus, present study takes an advantage of utilizing the data from NFHS-3 which was conducted by International Institute for Population Sciences, Mumbai during 2005-06. Bivariate and multivariate techniques have been applied to fulfill the proposed objectives

Results show the inequalities in receiving the advice on various maternal and child care practices in India. In total, there are around 47 percent women in India who had gone for ANC services but not advised for institutional delivery followed by 34 percent for proper nutrition during pregnancy. Socially and economically vulnerable Scheduled Caste/Tribes, rural, poor and less educated women are more disadvantaged in receiving the advice on maternal and child care issues.

Therefore, communication services as a part of health care services should also be given attention and efforts should be made to enhance these services as they can also help in improving the health status of mother as well as their offspring.

P0210

Perceptions and Practice with Regard to Reproductive and Sexual Health among out-of-School Adolescent Boys in Rural India

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India being home to 243 million individuals aged 10-19 years, the sexual and reproductive health needs of most of these adolescents is not yet adequately addressed under many primary care systems. Also these world's largest adolescents do not get to enjoy or have access to basic sexual and reproductive health care and make choices freely and responsibly. Even though certain reproductive health programmes are implemented, most of them are female oriented. Further most of the education programmes on reproductive health aimed at adolescents, targeted school students as they are easily accessible. School enrolment is poor in rural India and the population of out of school adolescents (drop outs) constitutes a substantial proportion of young people. Thus, meeting the reproductive health needs of adolescents requires not only providing services, but also changing attitudes, overcoming community opposition, and educating adults on reproductive health matters. The study was carried out in rural areas of Andhra Pradesh, India. The sample comprises of 450 out of school adolescent boys between the ages of 14 and 19 years. The study focus in detail on out-of-school adolescent's perceptions and practice with regard to sexual and reproductive health. The broad objective of the present study is to assess the sexual and reproductive health knowledge, attitudes and behaviour and socioeconomic and demographic characteristics of the out of school adolescent boys in rural areas. The specific objectives are a)To identify the knowledge and opinions on sexual and reproductive matters, changes during adolescence, STD/HIV/AIDS and family planning among adolescent boys b)To study the practices as well as experiences of reproductive and sexual health c)To study the age at sexual initiation, number of partners and consistent condom use d)To identify the major sources of information regarding reproductive health and family planning and e)To study the utilization of reproductive health including family planning. The findings reveal that income levels of the respondents significantly vary with their knowledge on female reproductive system (F. value 6.16, sig. at 0.002) and perception on changes during adolescence (F. value, 6.56, sig. at 0.002). There is significant variation in mean values (F. value, 10.05, sig. at 0.000 levels) between attitudes on family planning and income of the respondents. It is also evident from the results that attitudes on STI and HIV/AIDS significantly vary (F. value, 5.83, sig. at 0.003) by income level of respondents. The findings shows that attitudes on sexual behaviour in relation to income of the respondents are significantly vary (F. value, 9.69, sig at 0.000 levels). This study will help policy makers, programme planners and educators to better understand and assess the needs of adolescents, develop an appropriate reproductive health service delivery programmes and IEC approaches to adolescents.

P0211

Use of Q-Methodology to Explore the Range and Diversity of Iraqi Women's Viewpoints and Experiences of Maternity Services.

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The poor functioning of the Iraqi maternity health care services and the increasingly recognized need for reorganizing and improving these services encourage comprehensive assessment of the maternity services to better understanding its problems and needs. As part of such comprehensive assessment and due to the importance for policy makers to know knowing how the users feel about these services, we aim to explore the range and diversity of viewpoints towards Iraqi maternity services among women at reproductive age. The study will more specifically try to assess the perspectives of women about the current maternity services, define the problems, needs and obstacles to maternity services development as perceived by women and test a novel tool for assessing maternity services in the Iraqi context.

This explorative study will be carried out in Erbil governorate, Iraq. Data will be collected using Q-methodology, a technique for eliciting subjective viewpoints and identifying shared patterns among individuals. A sample of 40 to 60 women representing different geographical and socioeconomic areas of Erbil governorate will be invited to sort a set of statements reflecting different aspects of maternity services into a distribution on a continuum from "disagree most" to "agree most".

Analysis of the participants' Q-sorts should result in a number of factor solutions, i.e. a number of distinct women's viewpoints on the current maternity services. Ideal Q grids will be generated for each of these factors to clearly illustrate the pattern of response characteristics of each factor. Reporting presence of differences in viewpoints concerning the maternity services among Iraqi women might not be a newly generated knowledge by itself. However, this study will be able to identify and characterize these differences in a novel and insightful way.

P0212

Recruiting Young People to Become UNFPA Youth Advisory Panel Members

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Young people are having premarital sex and only a small percentage report using condoms. As a result, early pregnancies are becoming more prevalent.

UNFPA Youth Advisory Panel (YAP) recruitment process is designed to strategically form a true representation of youth from all groups including MSM, disabled people and ethnic minorities as well as keeping the balance of representation in terms of gender and culture. The first group of YAP members was selected through applications and interviews. Recommendations based on set criteria of the first group, shortlisted applicants of the second group attended a recruitment camp. Monthly meetings and three capacity building camps provide to ensure YAP's confidences and efficiencies.

YAP recommendations were presented to and accepted by the government for various project developments such as the standardization of Youth Friendly Health Service and Sex Education projects. YAP participated in various planning sessions and taskforce to address the emerging issue of teenage pregnancy.

It is a challenge in maintaining the active participation of all YAP members due to their diverse background and locations as well as their obligations. Social network tools are used to enable the virtual gathering of YAP. However, ideas are best stimulated when youth meet physically.

P0214

Determinants of Male Participation in Reproductive Health Care Services

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Recent attention on the important role of male participation in reproductive health has been significantly recognized. The present study investigated the role of men on some selected reproductive health issues, characterizing their involvement including factors influencing their participation in reproductive healthcare. The study was carried in some selected NGOs both in urban slums and rural areas of Bangladesh and the sample size was determined scientifically. The study was a cross-sectional one. Married males who attended evening clinic constituted the sampling frame. A total of 615 men were randomly selected for the study. Bivariate analysis was performed between male involvements as the dependent variable with independent variables. Logistic regression analysis was applied to assess the effects of the risk factors on the participation of reproductive health. Socioeconomic and demographic characteristics of the respondents showed that the mean age was 34.1 years, the mean education was 3.7 years, and the mean monthly income was about BDT 3400(One USD =50 at the time of study). The primary occupation of the respondents was mainly rickshaw pulling and driving in the urban area while farming was the main occupation in the rural area. More than one-third of men had access to any media and 10 percent men had access to all three media. About two-thirds men were discussed about reproductive health issues with their wives and they even accompanied their wives to health care facilities for seeking reproductive health care services. Current contraceptive use was little over 63% of the males who attended evening clinic. The bivariate analysis between male's involvements and demographic variables showed a significant association with education, occupation, income, access to media, and number of living children. Logistic regression analysis showed that secondary & above education, number of living children, paid employment status, long marital duration, and access to media were important correlates of male involvement in reproductive health care services. The study results implies that a greater integration of reproductive health matters with the millennium development goals and increasing men perception through enrollment in various components of the reproductive activates is believed to produce synergistic effects. The overall findings of the study suggested that more pragmatic and target-oriented programs will still be required to increase male involvement in reproductive health matters.

P0215

Is Lack of Health and Transport Facilities a Barrier to Use Maternal Health Care Services? A Study in a Backward District of Karnataka, India

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MDG Goal 4 and 5 emphasize on improving maternal health and reducing child mortality. The major intervention to minimize maternal mortality and infant mortality is to provide basic antenatal care, universalize institutional deliveries and provide timely postnatal care. In India, Government has taken steps to provide maternal health care at the door steps. However, several factors contribute for the women to utilize the maternal health care services. These include background characteristics of women and her family, such as educational level of women and her husband, economic background of the family and on the health services available and distance to health facility. There are several studies which focus on the effect of women's background characteristics on the use of maternal health care services. However, there is hardly any research on the availability of health infrastructure and transport facilities and utilization of maternal health care especially in rural areas.

Therefore, this study aims to explore whether availability of Primary Health Centre (PHC) and all weather road increases the use of maternal health care services in a rural setting in India.

In view of the objectives of the study, data collected in the rural areas of Yadgir district of Karnataka, which has poor health and infrastructural facilities compared to the other districts of the state has been used to analyze the data. The study covered 10,452 ever married women who were in the age group 15-49. The research paper uses the information on the use of maternal health care services (antenatal checkup, timing of first antenatal checkup, number of antenatal visits, receiving iron and folic acid tablets during pregnancy, TT immunization during pregnancy, place of delivery and postnatal care) which was collected for the last birth in the three years preceding the survey. The study revealed that presence of a PHC increased the utilization of antenatal checkup, antenatal checkup during the first trimester, institutional deliveries and postnatal care after 24 hours of delivery and decreased the percent of home deliveries. Similarly, availability of all weather roads significantly increased the utilization of antenatal checkup, percent of institutional deliveries and postnatal care after 24 hours of delivery.

Lack of availability (health) and accessibility (transport) are major factors affecting the use of maternal health care services in the study area. Addressing the lack of these facilities is crucial to increase the medical health care providers in the study area to lower the maternal and infant morbidity and mortality.

P0217

Women's Reproductive Health and Rights: Findings from a National Study

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This study reports empirical results based on an original survey of sexual and reproductive health and rights of women in Malaysia. Structured questionnaire was used in the face-to-to face interview with the sample participants, consisting of 2000 women aged 25 to 59 years. Included in the questionnaire were questions about their degree of involvement in sexual and reproductive health matters such as decisions on choice of first husband and contraceptive practices. Participants were also asked about their opinions on reproductive rights with regard to family planning, children, sexual relationships, pregnancy and abortion. Descriptive statistics and chi-square tests were used to examine patterns and association between socio-economic and demographic variables, and women's involvement in sexual and reproductive health decision making.

The sample shows that 80 percent of the total respondents were ever married with 73 percent of them currently married at the time of the survey. Among the ever married women, mean age at first marriage was 22.1 years and 73 percent reported that their first husband was of their own choice. This proportion is much higher among urban women, those who are working and those with higher educational attainment. The data also suggest that while 93 percent of the women know of at least one method of contraception, only 50 percent had ever used and a low 37 percent were currently using. The five most popularly practiced methods are the contraceptive pill, safe period, withdrawal, abstinence and condom. Among the current users the decision to practice was made by both partners, ranging from 83 percent for those using contraceptive pill and practicing abstinence, 82 percent withdrawal, and at least 75 percent among those using condom, safe period and injection.

In terms of reproductive rights in society, overall 84 percent of the women are of the opinion that it should the right of both partners. While the proportions who agree that women have the right to decide whether or not to have children and when to have them are high, 88 percent and 87 percent, respectively, the data suggest that the proportions who agree that it is their right to determine the number of children and to have sexual relationship are much lower, 65 percent and 67 percent, respectively. These proportions tend to decrease with increasing age and increase with increasing level of education. The proportions are also higher among Chinese, working and urban women compared with their respective counterparts.

P0218

Inconsistency in Reporting of Family Planning Methods Used by the Couples

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From the family perspective the first step in a rational process of fertility decision-making involves communication between spouses. Such communication should be one of the most important precursors of lower desired family size and increased contraceptive use. The present study aims to study the couple's inconsistency with respect to their use of family planning and factor affecting their inconsistency in India. The data from National family Health Survey (NFHS-III) 2005-06 has been used in this study. For the present study we are using information given by couple on current use of contraceptive by method type. If only husband is reporting about using and wife is not reporting vice-versa if wife is reporting about using and husband is not reporting; we consider it as a mismatching. In order to examine controlled effect of socio-economic factors on mismatching, logistic regression analysis was carried out in which dependent variable is mismatch. Results from the study shows that in case of current use of all method, in 14 percent cases only wife reported using and in 6 percent cases only husband reported using. In case of reporting of use of male method in 93 percent cases both reported same and in 4 percent cases only husband reported that he is using method and wife does not know about that. In 12 percent cases husband does not know that wife is using family planning. In case of pill use, in 2 percent cases only one of the couple report about using. Mismatch for IUD use is only one percent. In 7 percent cases only wife is reporting that she is sterilized. From the logistic regression it is clear that, Odds of having mismatch are high in the couples who got married before 10 years as compared to those who marry recently in case of all methods use as well as in reporting of female methods; whereas in case of reporting of male methods it is showing reverse results. Likelihood of having mismatch is high in urban area. Education of the women has positive and significant effect on mismatching. Education of husband has positive effect on mismatching about male methods whereas it has negative effect on reporting of female methods. Muslim couples are more likely to misreport than the Hindu couple. Odds of having mismatch are less in schedule tribe as compared to the higher caste couples in reporting of all methods and male methods. As compared to poor class couple rich couples are more likely to misreport about male method use.

P0219

Perception of Maternal Child Health Care Service Quality Correspond to Quality of Care Measures of Health Facility: Evidence from India

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This paper examines the effect of quality of care measures of health facility on client's perception about maternal child health care service utilization. Data for this paper utilized from the District Level Household and Facility Survey 2007-2008. For this study, 767 rural primary health centre (PHC) and 60340 currently married women of primary sampling unit (PSU) were selected. The perception about maternal child health care services of ANC provided by health personnel to women was assessed by client's perception as a spent enough time with them. In DLHS survey, it was asked to the women "was the antenatal check-up done with enough time, somewhat time or hurriedly by health personnel?" This question was asked only those women who had taken antenatal check-up, iron folic acid tablets/syrup and TT injections. Another question was asked to women about service perception of sterilization/IUD insertion and it was asked "How would you rate the care you received during and immediately after the sterilization/IUD insertion: very good, all right, or bad?" This question was asked only those women who were currently using permanent method of family planning.

The probability of client's perception regarding time given (enough time or somewhat time) while receiving antenatal care services were modeled using multinomial logistic regression, setting hurriedly as the reference category, by accounting for socio-economic-demographic-community (SEDC) effects. The predictors which significantly affects the relative risk of enough time with respect to hurriedly after controlling for women's backgrounds and quality measures-mean number of MCH and FP services available, technical capacity to provide MCH services, technical capacity to diagnose and treat RTI/STIs and reproductive health problems, visible technical capacity, availability of human resources, availability of rogi kalyan samiti (RKS). It is observed that client's perception was also driven by the greater technical competence that has an important role in service utilization. The mothers who received full ANC with enough time are 2.2 times ($p<0.001$) more likely to give birth in an institution than mothers who did not receive full ANC even after controlling for a number of potentially confounding variables. The multinomial logistic regression shows that only technical competence and interpersonal relationship indicators of quality of care have a significant role in client's perception for utilizing sterilization/IUD services as ‘very good' with respect to ‘bad'. It shows availability and accessibility of quality services have an impact on the clients perception. The training in MCH care services received by Medical Officers has a significant impact on the rating of clients' perceptions for utilization Sterilization/IUD services. The data explain a moderate amount of the variability in the quality of care measures, indicating that perceived quality is not fully predicted by the common measures of quality.

P0220

Addressing Reproductive Health Services among Indigenous Population by Assessing Contraceptive Use, Intention to Use and Unmet Need for Family Planning- A Case Study from Orissa, India

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The poor reproductive health is the outcome of prevailing unmet need for family planning practices which generates early pregnancies, unintended and unwanted pregnancies, excess fertility (when actual births more than desired fertility), poorly managed maternal and child care, which increase the chances of becoming poor and under developed. The health, education and per capita income is the key approach for finding Human Development Index which leads to quality of life which links between poverty and reproductive health. The study aims to assess unmet need and its Regional variation according background characteristics based on the data form NFHS-1, 2 & 3 and using uni-variate analysis and multivariate logit regression (m-log) models and GIS. The study reveals that the programme should look more towards the unmet need for women who are young, lower parity, rural areas, illiterate, other backward class, non-working, lower standard of living and poor inter-spouse communication about family planning in order to address the unmet need directly as well as poverty in Orissa.

P0221

Contraceptive Use and Sexual Behaviour by Unmarried Young Adults in Greater Jakarta

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Currently in Indonesia, the Population Law and Family Welfare no. 52/2009, states that family planning and reproductive health services are only available for individuals that are legally married or bride and groom to be. Policy and program in providing reproductive health services for those who are still singles remain implicit, though the Ministry of Health have started this service by incorporating it in pilot project in various PUSKESMAS. The policy of restricting access to reproductive health services to married couples, means that the reproductive health needs of young adults who are not married but are engaging in sexual intercourse are not being met.

We use data from the 2010 Greater Jakarta Transition to Adulthood Survey to investigate the sexual behaviour and contraceptive use of unmarried young adults, in the context of this absence of reproductive health services. The survey interviewed a representative sample of young adults aged 20-34 (3,006) living in Jakarta, Tangerang and Bekasi. In addition to a range of questions collected through a standard questionnaire conducted by face-to-face interview, respondents were also given a self-completion questionnaire that contained more sensitive questions including questions about their sexual experience and history.

Using this information we are able to identify directly whether unmarried respondents had ever had sex, and whether respondents who are currently married were married at the time of first intercourse. In addition to examining the percentage who had experienced intercourse outside of marriage, and the age at which this occurred, we also examine respondent's perceived level of knowledge about safe sex and contraception at the time of first intercourse as well as actual contraceptive use.

We find that at the time of first sexual intercourse, overall 16 per cent of respondents were not married, but there were significant differences by sex, age and relationship status. For example about one third of males were not married to their sexual partner the first time they had sex, compared to fewer than 10 per cent of women. Among respondents who were not married to their partner, only 35% had used either a condom or some other contraception at the time of intercourse. We also find that the majority of respondents felt that they did not have enough knowledge about contraception, or about safe sex at the time of first intercourse. Overall 21 % of men and 38 % of women who were not married at the time of first intercourse stated that they had 'no knowledge at all' about contraception. Similarly 16 % of males and 35 % of females stated that at the time they had no knowledge about safe sex.

P0222

Wealth Being Inequalities in Maternal Health Care Utilization: A Study from Highly Focused States of India

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Data: DLHS II, III. *Methodology:* Complete Maternal care index has been prepared. Regional inequalities were captured through location quotient and variable decomposition method.

Study reveals that maternal health care varies by wealth quintiles in all EAG states. However, significant progress has been observed for some maternal care indicators (had at least 3 ANC, check-up in first trimester, post natal care) in all regions. State Orissa shows the pro-poor distribution among social-group as well as by wealth quintiles. Percentage of women had ANC visit in first trimester of their pregnancy is higher in Orissa and Chhattisgarh compared to other states while full ANC is comparatively higher in Orissa. Safe birth deliveries are higher in state of Madhya Pradesh (MP), Rajasthan and Orissa. A sharp increase has seen for institutional births at public institutions in MP, Rajasthan and Orissa but not shown satisfactory growth in other regions over the five years of survey interval. Proportion of women, had ANC visit in first trimester increases from poorest to richest quintiles while the gap is almost same in all states. Based on maternal Health Index Uttaranchal, Madhya Pradesh, Orissa and Rajasthan showed better maternal care (4 and more services out of 5). Women from lowest wealth quintiles (WQ) mostly took only 1-2 services where maximum care (4-5 out of 5 services) has been taken from highest WQ women. Low prevalence has been observed among poorer group in all EAG states while richer section is dissimilar in different indicators of maternal care.

Concentration index shows the inequality has reduced in all states except Chhattisgarh. Inequality is higher for full ANC than other two indicators i.e. safe delivery and institutional births. States with low levels show a greater economic inequality within caste and they also show a small reduction in the inequality contrary to state with better performance. Women in Uttar Pradesh and Bihar from lowest quintile has less concentration of prevalence to have least 3 ANC compared to other states of same strata. Whereas, less concentration was observed among societal structure by economic stratum. Surprisingly, rural women belong to lowest WQ shown higher and lower concentration in upper WQ women compared to aggregate EAG values. Similar results observed for and educated women. Results for institutional delivery show women from states Bihar, Jharkhand, Chhattisgarh belonging to lowest quintile has less relative concentration and higher in higher WQ. OBC women from lower WQ have higher concentration but lower in upper WQ and similarly for higher education. Overall, the Wealth being has not come out as the significant and responsible factor for inequality in maternal health care utilization. Whereas, after decomposing the covariates education and caste showed maximum contribution to the maternal care.

P0223

Factors Affecting Contraceptive Use among Scheduled Tribe and Non- Scheduled Tribe Currently Married Women in India

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This paper attempts to explore the level of variations in the use of contraception and factors affecting to it among currently married women between scheduled tribes and non-scheduled tribes.

The paper utilises the data from third round of District Level Household Survey conducted during 2007-08. The District Level Household and Facility Survey (DLHS-3) is a nationwide survey covering 601 districts from 34 states and union territories of India. Response variables used in the study are any modern method, female sterilization, any spacing method and any traditional method while explanatory variables are age, number of living children, type of residence, education, occupation, religion and wealth index. Bi-variate and multivariate techniques (binary logistic regression) have been used for the analysis.

There is remarkable difference in the use of any method, any modern method and any traditional method between the two categories. The contraceptive prevalence rate among scheduled tribe currently married women is 47 percent as compared to 56 percent among non-scheduled tribe currently married women. Female sterilization is the most popular method among modern methods in both the categories. Its prevalence is relatively low (31 percent) among scheduled tribe currently married women. The use of any spacing method remained low among both the categories. Contraceptive use of any method and any modern method is more among urban women than rural women in both categories while any traditional method is more popular in rural area. With increasing years of schooling female sterilization is decreasing while the use of any spacing method and traditional method is increasing among both categories. Working currently married women are using less contraception rather than not-working women among both categories except sterilization among non scheduled tribe currently married women. Traditional method is more prevalent among Muslim currently married women in both categories. The rich-poor gap persists in the use of contraception too. Currently married women belonging to highest quintile are using more contraception relatively in both categories.

Age and number of living children have significant impact on the use contraception among both the categories. Urban women are more likely to use any modern method and less likely to use any traditional method than rural women. Education has also significant positive effect. Occupation, religion and wealth index are also affecting contraceptive use significantly. Currently married women in upper wealth quintile are more likely to use any modern method than women in lowest wealth quintile. Multilevel analysis is showing more variations in the use of any method and any modern method of contraception among women of both categories according to economic status.

The paper concludes that education and economic status are important predictors for the variations in the contraceptive use among currently married women between scheduled tribes and non-scheduled tribes.

P0224

Safer Sex Practice Issues and Higher Risk of HIV Epidemic in Bangladesh

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Although the overall prevalence of HIV in Bangladesh is less than 1 percent, the country remains extremely vulnerable to an HIV epidemic given its dreadful poverty, overpopulation, gender inequality and high level of transactional sex. The number of HIV positive individuals was estimated at 12000 in 2001 (UNAIDS). It is estimated that without any intervention the prevalence among the general adult population could be as high as 2 percent in 2012 and 8 percent 2025. Cross-border interaction with high-prevalence, low condom use among general adult, and a lack of knowledge about HIV/AIDS and other sexually transmitted infections (STIs) are contributing for HIV/AIDS vulnerability among Bangladesh population.

Bangladesh Demographic and Health Survey 2007, found that 22.9 percent of women of age 15-49 years and 10.2 percent among 3226 men reporting having STIs and /or symptoms of STIs who had sex ever in the past 12 months. Information about the prevalence of STIs is useful not only as a marker of unprotected sexual intercourse but as a cofactor of HIV infection. Comprehensive knowledge about HIV transmission and ways to prevent it are basic prerequisites to prevent infection.

Only one-third of ever-married women are aware of the three major ways to reduce the risk of getting HIV. Merely 32 percent are conscious about abstaining from sexual intercourse, no more than 33 percent recognize with limiting sex with one uninfected partner who has no other partner and only 33 percent familiar of using condom during each sexual exposure. Women have poorer knowledge than male. Only 20 percent of women are aware both that using condoms and limiting sexual intercourse to one uninfected faithful partner can reduce the risk of getting AIDS compare to 52 percent of men. Male condom is used by 5 percent of women. Education and wealth have strong correlation.

The 2007 BDHS survey also shows 86 percent of women and 90 percent of men think that if a woman knows her husband has a sexually transmitted infection, she is justified in refusing to have sex with him. Yet there is significant variation in women's attitudes toward negotiating safer sex with husbands in different geographical areas in Bangladesh from 67 to 93 percent.

As the scenario of the HIV epidemic in Bangladesh changes very rapidly, people should have proper understanding about safer sex practice for the sake of preventing this epidemic.

P0226

A Multi-level Intervention to Promote Sexual Health among Married Women in Low Income Communities of Mumbai, India.

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The study is focuses on monogamous married women in a low income population in Mumbai whose risk for HIV/STI is linked primarily to their husband's extramarital sexual behaviur. The project design recognizes that reduction of sexual risk cannot be accomplished by just working with individual women, but must also involve their husbands and families, the health care system and the general community.

The project began with one year of qualitative and quantitative formative research (May 2008-May 2009). In June 2009 a randomized controlled trial (RCT) was initiated among women coming to the Urban Health Centre with gynecologically-related complaints of *safed pani* (70% with this complaint) along with genital itching, burning micturation, inguinal swelling, lower abdominal pain, and ulcers on the genitals are referred to the WHC. The RCT coordinator determines eligibility and seeks consent from all the eligible women. If a woman consents to the RCT, she is randomly assigned to one of four arms: 3-5 individual counseling (IC) sessions, couples' intervention (CI), a combination of both (IC + CI) or to a control group. The project is evaluated at the individual, couple, health care system and community levels. At the individual level women are administered the Women's Structured Survey (WSS) at baseline, receive a medical/internal exam and STI (CT, NG, HSV-2) and RTI (BV and Candidiasis) testing; at 6-month follow-up they respond to the WSS including items concerning their experience with IC and CI, and at one year follow-up they again respond to the WSS and have a repeat medical and internal exam and STI/RTI testing.

As of November 30th 2011, we have recruited 856 married women into the RCT. Preliminary analysis comparing WSS baseline with WSS 6-month follow-up, comparing those involved in the intervention against the control on the major outcome variables have shown that the intervention group shows better Sexual Health, greater knowledge about STIs, less sexual problems, better treatment seeking in health problems, greater participation in household decisions, better husband-wife agreement on issues, women's increased control of finances, greater time spent by a husband in the household and more positive gender-equity attitudes. Further analyses indicate that greater dose of intervention have significantly more positive impact on these variables than lesser doses and that among the intervention group, CI seem to show greater impact than IC.

We have established: (1) The feasibility of enhancing health services for women at a primary care cantrer; (2) The importance of *safed pani* and other gynecological problems as a means of identifying married women at greater sexual risk; (3) The feasibility of involving urban poor women in individual counselling and wives and husbands in group couples' intervention for promoting sexual health.

P0227

Deconstructing High Traditional Method Prevalence and Low Fertility: Is Induced Abortion the Answer?

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Urban women in West Bengal, India want lesser children (1.6 children) however there is a heavy dependence (26%) on traditional method (periodic abstinence and withdrawal). This is neither propelled by religious restrictions nor by an aggressive family planning programme. Earlier research demonstrated reliance on traditional method as a result of religious restrictions as in Philippines or due to an aggressive family planning program (Steele *et. al.* 1999; Cohen 2000; Brown *et. al.* 2007; Juarez *et. al.* 2009). This paper deconstructs traditional methods use, low fertility and induced abortion rates.

It is based on DHS data for two years for urban West Bengal and District level household survey of urban West Bengal. Currently married women in the age group of 15-49 years have been interviewed in the cross sectional surveys. Birth Interval analysis for NFHS-3 was conducted on the cross sectional survey of women.

Multinomial logistic regressions have been used to assess the predictors of traditional method use and induced abortion and progressively traditional method use and induced abortion. Indirect estimates of abortion with the help of Westoff's method and Bogart's method is also calculated to compare variation in abortion rates. We have conducted a birth interval analysis to understand abortion.

Education and standard of living significantly affects traditional methods use as well as induced abortion. Only 18.5 percent of women choosing rhythm have knowledge about fertile period exposing them to the risk of unintended pregnancy. The cross sectional survey data (NFHS) data do not support high abortion rates in Westbengal. However, Indirect measures show high abortion rates in West Bengal but these estimates are crude. Thus the birth interval analysis is conducted to be interpret the low fertility and also traditional method use. The results will be shared at the time of presentation.

The national government should take up education strategy to demystify the side-effects of modern method and make them acceptable and popular among the urban educated middle class couples. Moreover, as traditional method use is dependent on users the state government should target couples with a definite socio-economic background and educate them about traditional method use as that can reduce unintended pregnancy and induced abortion.

P0228

Perception, Experience and Health Status of the Women who had Undergone Uterine Prolapse Surgery in Doti District of Nepal

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Poor health including uterus prolapse (UP) among women of reproductive age has been a major public health concern in Nepal. Ministry of Health and Population has given high priority to provide free treatment to women suffering from uterine prolapse. As a result more than 10,000 women have been receiving UP surgery free of cost every year since the start of free UP treatment policy in fiscal year 2066/067. However, updated information is not available to understand health status of the women after the UP surgery.

Objective

- to explore the sociodemographic characteristics of women receiving UP surgery
- to explore women's perception about her health status before and after UP surgery
- to examine the post UP surgery complication and related care seeking behavior and
- to examine the women's perception on UP and access to UP treatment in the district

Doti was purposively selected for the study because, anecdotal information show that Doti is one of the high UP prevalent district. Women who had undergone UP surgeries in the past were the respondents. Face-to-face interviews was used to collect information related to sociodemographic characteristics, pre and post surgery experience, post UP surgery complication and related treatment seeking behavior of the respondents. Study team had made household visit with the help of FCHVs to trace all UP surgery during 15 days field visit.Field researchers had visited 1 Municipality and 18 VDCs and found 121 total cases who had undergone UP surgery.

Majority of women who received UP surgery were over 40 years of age, lived in joint family, illiterate,had their first birth at an early age, and had five children in an average. Very few women went for ANC check up during the last pregnancy (25%) and very few delivered at a health facility (9%). Nearly one in third women had an abortion (30%) in their lifetime and majority of women who had UP surgery were from poor family and had smoking habits (48%).

Domestic violence was high among women receiving UP surgery.Almost seventy percent of the women reported that they were humiliated in front of other people by their husband and about a half (45%) were slapped by their husband. Majority of the women had UP problem (51%) before the age of 25. Women were not able to decide for their own health care and health facility for UP surgery was not easily accessible to these women. A high majority (76%) of women travelled more than two hours to reach the facility for UP surgery.

More than one-third (35%) of women perceived that their health status was good after surgery than it was before (7%). Substantial proportion (40%) of women had also experienced complication after surgery. About two in five women (38%) who had complication after surgery did not seek treatment.

P0229

Husbands' Involvement In IUD Use: Does It Make a Difference?

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The IUD, CT 380 A is a safe and reversible method that offers 10 years protection against pregnancy. According to the 2007 Bangladesh DHS the IUD use rate was 0.6% in method mix and one-year discontinuation rate was about 35%.

In March 2007 EngenderHealth carried out a retrospective cross sectional study in six districts of Bangladesh to assess the IUD discontinuation rate and key determinants of IUD discontinuation.

330 IUD acceptors were followed up 12 months post insertion. In-depth interviews were conducted to bring out their experiences with side effects, steps taken to try to resolve the issues, and the decision-making processes around IUD acceptance and removal.

Out of the 330 IUD acceptors in the study, 156 women discontinued the IUD within one year. The main reason for removal was experiencing side effects (88%), followed by concerns of the husband (22%). While three-quarters of all women complained of side-effects, not all of them removed the IUD as a result, other factors were also found to be important in the decision-making process. Support from the husband, or lack thereof, was found to be a key factor. Women who discontinued were found to have unsupportive husbands before insertion and/or after insertion. The ability to have sexual relations is an important priority for the husbands. However, a number of women were unable to have sexual relations due to excessive bleeding and lower abdominal pain. In addition they were unable to perform household work and pray. All of these caused dissatisfaction among the husbands and as a result a number of IUD users were passing their life in marital disharmony, anxiety and fear. They blamed themselves for this situation, felt guilty for it and discontinued the IUD to escape from the situation.

In Bangladesh, husbands are main decision makers in the family. In the provision of family planning services, husbands are often overlooked and not directly included by the service providers in the counseling and decision-making process. Based on the findings, the study recommends that husbands be involved in IUD counseling so that they would have a better understanding of the IUD, be involved in the decision-making process, and can support their wives. The study findings strongly suggest that this will help increase the overall IUD continuation.

P0232

The Challenge of Implementing Integrated Reproductive Health Services at the Primary Health Care in Indonesia

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The 1994 International Conference on Population and Development (ICPD) in Cairo, suggested that the provision of comprehensive reproductive health services should be facilitated through integrating services delivery. The conference Program of Action also called upon all countries to provide integrated Reproductive Health Services through the existing primary health care system.

In line with this, the Government of Indonesia, through its Ministry of Health, has developed an essential reproductive health service program by introducing an integrated reproductive health service at the PHC. In collaboration with The UNFPA, several PHCs have been able to improve their services by implementing Integrated Essential Reproductive Health Services, while others still facing obstacles to do so. The present study is aimed at assessing the challenge facing by the PHCs in implementing the integrated services.

The study was carried out in four regencies of Indonesia namely Pontianak, Landak Tasikmalaya and Ogan Komering Ilir. In each district four PHC were visited. The field work was conducted in 2007 utilized qualitative approach combined with secondary data analysis. A series of open-ended interviews and 10 focus group discussions were carried out in the study sites.

The study found that the changes of service mechanism in PHC of IERH services from separated services into integrated services have improved clients satisfaction on the services as well as health workers in delivering the services. The satisfaction of these services has an impact on the increase awareness of the people to examine routinely of their reproductive health condition. While for health workers, the implementation of IERH services has motivated them to seek as much information as possible from their clients, thus diagnose of diseases and medical treatment can be provided better. In addition the implementation of IERH services in PHC has expanded the range and coverage of services to include STI, adolescent clinic and counselling. By expanding the services, PHC have able to reach under-served population such as adolescent through providing youth friendly programs.

In general the IERH services can be implemented using existing standard health facilities in PHCs. Nevertheless to improve the quality of services it needs additional facilities such as complete laboratory equipment for Sexually Transmitted Infection (STI) and the availability of a special room for the STI and Adolescent Clinic. Socialization of the concept, approach and mechanism of the services to the key stakeholders is very important. The better understanding of stakeholders about IERH services, the higher supports are given to the program. In several areas the understanding of policy makers on the IERH services are relatively low. This has an impact on insufficient supervision and monitoring of the program in the PHC level.

P0234

Choices of Delivery Care Utilization in Urban and Rural Areas: Evidences from Two Health and Demographic Surveillance Sites in Vietnam

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The choices made for delivery care are based primarily on the wish to have good health outcomes for women and children but also dependent on the available resources like facilities and economy.

The aim of this paper is to study delivery care utilization in one urban and one rural Vietnamese area focusing on the choices of place for and mode of delivery and economic aspects of the delivery. The study also aims to identify factors and conditions associated with the use of hospitals and Caesarean Section (CS).

The study was conducted using two cohorts of women delivering children in the DodaLab and FilaBavi Health and Demographic Surveillance Sites (HDSS) in Hanoi, Vietnam. Recruitment of pregnant women was made from April 2008 to December 2009. In total, 2515 deliveries were identified through quarterly household interviews using structured questionnaires, identically in the two sites.

Almost all women delivered at health care facilities. Most rural women gave birth at district hospitals (54.2%) and commune health centres (34.3%) while urban women mainly used central hospitals (57.4%) and provincial hospitals (36.2%). All births were attended by health workers, mostly physicians, 95.6% in the urban and 51.3% in the rural areas. CS was used in 38.5% of the births in the urban area and 12.4% in the rural. Hospital delivery and use of CS were more common among women older than 35, nulliparous women, highly educated and employed women, women with good economic condition, women who gave birth to a son and women without previous son. The economic burden for delivery was heavier among poor rural women giving birth in hospitals or using CS.

The delivery care appears to be at a higher level than necessary, particularly among women in good economic condition. CS is likely to be overused. To change the situation, efforts should be made to promote delivery at primary health care level, to improve the role of midwifes and to improve compliance with indications for CS. Antenatal care should be reinforced to make mothers better educated about pros and cons of delivery choices and use of technology.

Key words: Delivery care utilization, hospital delivery, caesarean section, rural and urban, Vietnam.

P0236

Contraceptive Choice, Abortion and Socio-Economic Status in Cambodia: Why the Preference for Traditional Methods?

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This research examines the relationship between socio-economic status, abortion and choice of contraceptive method in Cambodia. The research takes a mixed methods approach bringing together quantitative analysis of the Cambodia Demographic and Health Survey data and ethnographic research conducted over 21 months in Siem Reap Province Cambodia. Results of binary logistic regressions showed counter-intuitive findings: increased education and wealth are associated with increased likelihood of using traditional rather than modern methods. Results of the ethnographic research explained the quantitative findings. Most women were concerned about the health side-effects of modern contraception, whilst at the same time recognized the unreliability of traditional methods. Wealthier women were better able to deal with unintended pregnancies which may arise when using withdrawal or periodic abstinence. They know they have the option of a safe abortion, which would not jeopardize their health and finances to a great degree. Therefore they were able to avoid widely perceived health risks of modern contraceptive methods. However economically disadvantaged women, equally concerned about side-effects, felt they could not risk another child or an abortion so opted for a more reliable contraceptive method. There was low knowledge about the legality of abortion, where to access services, costs and safety. Rural women from economically disadvantaged backgrounds relied on traditional massage techniques and herbal drinks for abortion, perceiving other methods to be out of reach financially or less safe than traditional abortion techniques. This dynamic between socio-economic status, traditional method use and abortion has important implications for policy makers, as traditional (less effective) contraceptives are becoming increasingly popular in Cambodia.

P0237

Economic Backwardness and Pregnancy Related Complications in the State of Tamil Nadu in India

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Pregnancy is a normal, healthy state, which most women aspire to at some point in their lives. Yet this normal, life-affirming process carries with it serious risks of death and disability. The statement that worldwide, over half a million young women die every year as a result of complications arising from pregnancy and childbirth has been repeated so often that it no longer shocks. Yet most of these deaths could be avoided if preventive measures were taken and adequate care available. For every woman who dies, many more suffer from serious conditions that can affect them for the rest of their lives (WHO, 2004) Improvement of maternal health is enshrined in the Millennium Development Goals as one of the essential prerequisites for development and for poverty reduction.

In India, Tamil Nadu State has been, over the years earned a peculiar position in the field of health and family welfare. The birth and death rates are one of the lowest in the country, as suggested by the latest Sample Registration System (SRS) figures. In fact, Tamil Nadu the second State in India, after Kerala had achieved the replacement level of fertility in India. The economic development has been very impressive too, in Tamil Nadu, according to the Central Statistical Organisation's (CSO) recent year's data.

Despite its all positive aspects, Tamil Nadu is facing new challenges in the health scenario. The Morbidity rates have been increasing in the State, as pointed out by several statistics. The third round of National Family Health Survey (NFHS), conducted during 2005-2006 underlined the higher levels of morbidity; especially among pregnant and lactating women. The survey revealed that, the pregnancy and delivery complications had been increasing.

One would assume that, the pregnancy related complications are mostly influenced by the economic status, in the era of globalization, and it is considered as the rationale of the present study. But, there are several other factors affecting pregnancy related complications also, especially when the components of globalization are in operation. The complexity of the situation is analysed, with special emphasis on economic backwardness of women in Tamil Nadu. Therefore the *objective* of the present study is to analyse the neterminants of pregnancy related complications among currently married women in Tamil Nadu, with special emphasis on economic backwardness.

The Third round of District Level Household Survey (DLHS-3), conducted during 2007-08, has been used for analysing the above objective.

The initial analyses showed that the changing economic conditions, especially the economic backwardness of women have a significant impact on the pregnancy related complications in Tamil Nadu.

P0238

An Analysis on Induced Abortion, Morbidity and Obstetric Fistula among Married Women in India.

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Obstetric fistula is one of the major causes of maternal mortality caused due to prolonged labor and unsafe induced abortion. The present study examined the intricate process of unsafe induced abortion practices and occurrence of symptoms of obstetric fistula under morbid conditions of married women of reproductive age (15-49 years) in different states of the country. The objectives of the study were proven with the support of Reproductive and Child Health survey, which was conducted throughout the country in 2007-08. The women were asked questions with a help of a structured questionnaire contained both open and close-ended questions, was divided into section of characteristics of respondents and awareness of and perceived causes of obstetric fistula and reproductive health related questions. Apparently, unsafe induced abortion leads to degraded obstetric history and influence the next birth order. Sarcastically, the awareness of the risks and perceived causes of obstetric fistula among the women of reproductive age (15-49 years) in India is minimal or absent. In addition, the women does not express requirement of treatment even if the problem is identified. The conditions are extensively vulnerable in rural parts of the country as firstly, the problems could not be recognized and in case identified, then also women are not encouraged to seek treatment. The morbidity conditions of the women further augments problems and lead to critical conditions. Under anemic and malnourished conditions, women could rarely bear the pain and hence turns into fatal case.

The findings show that about although the percent of induced abortion is less, but it has impact on occurrence of symptoms of obstetric fistula and when probability of influence of morbid conditions was applied, and then the chances of symptoms rose significantly. A minimal percent of women were aware of the incidence of fistula and its risks on women reproductive health physiology. Further findings identified various perceived causes of fistula to include level of education, place of induced abortion, urban and rural differential, and age at marriage and other independent variables.

Hence, there is a need to improve the reproductive health education among women, although recommended in NRHM to overcome the low level of awareness among women and improved etiological perception.

Key Words: Obstetric fistula, induced abortion, NRHM, Reproductive and Child Health Survey

P0239

Post Partum Care in India: Way to saving Mother's live

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Millennium Development Goal 5 is targeted to reduce maternal mortality by three quarters between 1990 and 2015. Most of the maternal deaths occur in India during home delivery and with little or no care during delivery and post partum period. The post partum care should fulfill the needs of the mother and baby and must aim to reduce mortality and severe morbidities, as well as promote the health of mother and newborn. The National Family Health Survey-3 (2005-06) estimated that nearly 60 percent of mothers did not receive any post partum care after the child birth, and hence nearly 15 percent of women suffered from some postpartum complications in our country. Only 37.3 percent women received post partum care within 48 hours of delivery. Nearly 40 percent of first postpartum check ups provider are doctors and ANM. In 1971, hospital based postpartum programme was introduced mainly to provide family planning to the women coming for delivery. In India, ANMs are trained for 18 months but not allowed to give injectable antibiotics for post partum infections. The main objective of the paper is to examine the prevalence of post partum complications by types of delivery and place of delivery and treatment seeking behavior. In addition, it also explores the likelihood of postpartum complication by postpartum care. Further the paper seeks the influence of socioeconomic factor on treatment seeking behavior among who had experienced postpartum complications.The paper uses data of 39,677 women (15-49 years) who had given birth in the five year preceding the survey from the NFHS-3. To examine the effects of different socio-economic and demographic factors, on postpartum complication and post partum care and also treatment for post partum complication, bi-variate and multi-variate techniques are applied.The results show that women who had institutional delivery also experienced similar postpartum complication as women with home delivery. Moreover, women who received postpartum care reported more of complications than women with home delivery. This shows that recognition of the complication is early with increased postpartum care. There is wide variation on reporting of postpartum complications and treatment seeking with change in educational level and wealth index.

An integrated postpartum care includes the prevention and early detection and treatment of complications and diseases and the provision of advice and services on breast feeding, birth spacing, immunization and maternal nutrition. However, in India, policies related to postpartum care mainly focused on neonatal care and over looked the post partum complications and counseling on family planning. Therefore, the post partum care policy needs to make sure that women and newborns are the focus of attention of service provider immediately after delivery and periodically throughout the first week to ensure their survival and continued good health.

P0240

The Role of Imams in Improving Reproductive Health Level among the Muslim Population of Xinjiang Province in China.

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In Xinjiang, more than 60% of the population are Muslims. Associal development lags behind, educational level of people is low, coupled with traditional customs and religious impact,the standard of reproductive health among Muslim population is low and really a big concern.

However, publicity and education on reproductive health is very difficult within the area,some religious people even against the progress. Women are shame to expose their body. Pre-marital check, gynaecological examination in hospital are not allowed. Thus, the progress of development in reproductive health standard is very slow.

Special status in Islam give imams their influence among the Muslim population. To improve the reproductive health of the Muslim, it is necessary to change and open their mind. Getting support of religious people become extremely important.

From 1999 to 2004, "Reproductive Health Education and Promotion" was Implemented by China's National Population and Family Planning Department among Muslim populated regions in Xinjiang. Cooperation within government departments, religious organizations and religious services societies made it works. Religious organizations and religious services societies played an important role between the Muslim and government. The progress is different from mainland within the Han region.

Although pilot project has achieved some results, the task was not well designed and unscientific. The level of effectiveness is not known because lack of quantitative data support .

With the experience gained in the pilot, further reproductive health promotion project expanded to 29 townships from December 2009 to December 2011 within the region which the population of Muslim is relative concentrated in XinJiang. Fortunately, we have a baseline survey this time before the implementation of the project, and the final line investigation is just finished in December 2011.

In this study, by comparing and analyze the data from two surveys, we are going to determine the implementation of the project, evaluate how imams played their role to improving reproductive health among the Muslim. We hope the results are significant, therefore government departments can increase the intensity of implementation of the project. Starting from all Muslim people within the region, and then benefit all the people in Xinjiang.

P0241

Perceptions on Female Autonomy and Men as Supportive Partners in Promotion of R.C.H A Study among Slum Dwellers in A.P

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The statment on the occasion of world population day UNFPA (2007) highlighted the important of involvement of males in promotion of R.C.H programs. It advocated tht men sahll be supportive partners of women especially in activities like a) Care for wife during pregnancy, b) care for babies c) Provide better education to daughters and d) share parenting.

Through considerable efforts are being taken by governmental and non-governmental agencies, to promote RCH, yet the child morbidities, mortality and material mortality are still at higher level.

The status of RCH among slum dwellers is deteriorating day by day efforts to cope up with the siutation by different agencies are not fully sucessfull.

Usually males play important and often dominant role in decisions crucial to female's reproductive health. it is men who usually decide on the number and variety of sexual relationship and use of contraceptives et.. Women can not promote Reproductive health with out the co-operation of males. The males who respect the wills and views of femlales will be more ready to adopt safe sex practice. A direct relationship can be assumed between the positive perception of males on women's autonomy and their involvement in promotion of reproductive health. The present study focus on these assumptions.

P0242

Community Support Groups: Expectant Contributors in Improving Maternal Health in Rural Bangladesh

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In recent years, there has been a major emphasis on the persisting burden of maternal, newborn, and child mortality globally with a particular focus on the Millennium Development Goals (MDGs) for maternal and child health. The status of maternal health remained an area of significant challenge in Bangladesh. Lack of awareness and socio-cultural and religious taboos contribute to the high maternal mortality of 194 per 100,000 livebirths in Bangladesh. One evidence-based intervention to increase awareness of the causes of maternal mortality and to encourage advocacy actions that will improve health outcomes for the mother is social mobilization through community support groups (CSGs). As a part of a demand side intervention, ICDDR,B formed CSGs by involving members of communities in Shahjadpur sub-district.

The objectives of the CSGs are to identify pregnant women, sensitize the women and other members of the family about the need of using skilled care for maternal health; provide support to the poor and disadvantaged by fund raising, arranging transportations for the mothers with complications for transfer to facility; and establish linkage between the community and the facility.

By December 2010, 68 CSGs had been formed. Each CSG was comprised of 30 members in three different tiers - an advisory committee, executive committee and volunteer committee based on fully volunteerism. The aim of the committee members was to persuade family members and the pregnant mothers to communicate with local health facilities and heath service providers to ensure availability of maternal health care services at the needed time. The effectiveness of CSGs was assessed at community level through a baseline and a follow-up survey during November 2008 to March 2009 and October to November 2010 among mothers who delivered in the 6 months prior to the interview date through a structured questionnaire.

In the baseline and the follow-up surveys, 3158 and 2725 mothers were recruited respectively for interview. During the baseline survey nearly three-fourths of the mothers (69.6%) received any antenatal care (ANC) which was increased to 84% after formation of CSGs covering almost all the unions of Shahjadpur sub-district. Skilled attendance at delivery was 26.4% at baseline and increased to 41.7% during the follow-up survey. Mothers who attended the courtyard-sessions conducted by CSGs during the time period received substantially more ANC and skilled delivery care than the mothers who didn't attend.

In conclusion, findings suggest that the courtyard-sessions through CSGs can make a significant contribution to improve maternal health-seeking behavior. Participatory approaches through courtyard-sessions and family involvement in care stimulated by the development process of CSGs appear effective in improving maternal health in rural Bangladesh.

P0243

Role of Nurses in Maternal and Neonatal Health Care Programmes in Bangladesh

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The nurses have the potentials to contribute to country's maternal and neonatal health care. Little is known about their competence to manage the life-threatening obstetric complications in Bangladesh. The study aimed to assess the knowledge, skills and confidence of nurses in different settings in provision of maternal and neonatal health care services as envisioned in WHO/FIGO/ICM definitions of a skilled birth attendant as a basis of initiating quality improvement.

As part of a study on the role of nurses in maternal and neonatal health care programme in Bangladesh, a knowledge and skill test was conducted in two Government settings (Khulna and Sylhet), in Bangladesh. Written **knowledge test** and a **skills test** were undertaken based on clinical models and dummy patients for all existing staff nurses of these facilities. A total of 109 purposively selected nurses from Khulna and 45 nurses from Sylhet district participated in the study. For knowledge test, a total of 50 multiple choice questions covering maternal and neonatal knowledge component, i.e. antenatal care, labor and delivery following aseptic techniques, family planning and post natal counseling, newborn care and resuscitation and use of partograph woman were administered. Skills were assessed through observation using a structured checklist covering antenatal care, normal vaginal delivery, childbirth and immediate newborn care, postnatal care newborn resuscitation and two case studies: management of Post partum hemorrhage (PPH) and manual removal of placenta.

Knowledge test**:** The result shows that overall percent mean knowledge score of Sylhet is 53% and 52% for Khulna nurses. Nurses from both areas had lack of knowledge on partograph.

Skills test: The overall percent mean skills test score of Sylhet was 33 % and for Khulna mean skills test score was 40%. Nurses from both areas demonstrated inadequate skills in managing life – threatening complications, i.e. Haemorrhage, pre-elampsia, elampsia and puerperal sepsis etc. Among nurses of Sylhet the percent mean test score on newborn care and resuscitation was 29% and for Khulna mean score was 33%. Nurses from both districts were unable to perform all the steps of PPH management and were unable to perform the procedure of manual removal of placenta. Percent mean skills scores on "case study on PPH management" were 34% in Sylhet and for Khulna it was 42%.

Knowledge and skills of nurses from both study areas were found to be much below the evidence based standards on selected obstetric and neonatal complications. It is therefore necessary to take steps to improve nurses' competence in order to utilize the nurses 'midwifery skill to improve the maternal and neonatal health programmes in Bangladesh.

P0244

Pre Marital Sex Adolescent Attitude and Behavior in Indonesia

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This research aimed to identify the relationship of perception, information and social environmental factors on the premarital sexual relation attitude and behavior. Perception factors included the perceptions on virginity, marriage, and pregnancy, while information factors consist of discussion concerning reproductive health with family, discussion on reproductive health with peers, knowledge on fertile period, knowledge on HIV/AIDS and mass media exposure on reproductive health. While the social environment factor involve peer social environment, access to reproductive health association, socialization on reproductive health in the community, and reproductive health topics in school.

This study exploited the data of the 2007 Indonesian Reproductive Health among Adolescents. The purpose of this research was to statistically analyze factors influencing attitudes and behavior of premarital sexual relations among Indonesian adolescents. The processed data involved all respondents in the survey of adolescent reproductive health, totaling 19,311 Indonesian adolescents. The chi-square (χ^2) and logistic regression statistical tests were used in this research. The trends (opportunities) and relationship path were viewed from the odds ratio (OR) with confidence intervals (CI) of 95 percent (p-value <0.05) and pathway analysis.

The multivariable analysis results showed that several variables showed consistent influences on sexual attitude and behavior among Indonesian adolescents. These variables involved the perceptions on virginity, marriage, and pregnancy, discussion with family, discussion with peers, peer environment, and reproductive health topics in school. The six variables showed direct and indirect relations on the premarital sexual relation behavior with variable attitude on premarital sexual behavior. The variable reproductive health socialization in the community merely provided significant effects to attitude on premarital sexual relations, while knowledge on fertility, media exposure merely had significant influences on premarital sexual relation behavior.

The study also found that advances in technology and information that is marked by the number of adolescents who access the mass media, especially television that includes reproductive health messages, it contributes significantly less on the premarital sexual relation attitude and behavior. Similarly, the increasing influence of peers would have a negative impact on the premarital sexual relation attitude and behavior among adolescents. The value of virginity which is reflected by avoid premarital sexual intercourse, discussions with family and reproductive health topics can give a positive effect on the premarital sexual relation attitude and behavior among adolescents.

P0245

Psycho-Social Factors Correlated with HIV/AIDS Preventive Behavior in Men Who Have Sex with Men

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The purpose of this correlation-comparative study was to test a cause-and effect model of psycho-social factors affecting sexual health among Thai MSM. A structural equation model was proposed in which the relationships among psychological or situational antecedents and HIV/AIDS preventive behavior were explored.

666 adult MSM over 25 years of age living in Bangkok having completed bachelor's degree were recruited as samples for study. Stratified quota random sampling method was employed to obtain the participants.

Participants were assessed using structured questionnaires to measure the constructs of the hypothesized structural equation modeling. Situational Factor Scales, Psychological Trait and Psychological State scales, and HIV/AIDS preventive behavior questionnaires were collected. The preliminary model fit criteria, and overall model fit was used to assess the HIV/AIDS preventive behavior model fit.

Results revealed that self-efficacy beliefs, peers influence, perceived availability and accessibility to condoms, and religious way of life had indirect effect on overall HIV/AIDS preventive behavior through the attitudes toward HIV/AIDS preventive. MSM with high level of all above psychological and situational antecedents had more positive attitudes toward HIV/AIDS preventive and were more likely to increase practices of HIV/AIDS preventive behaviors. Other significant variables effect on HIV/AIDS preventive behavior included receiving AIDS information, and mental health.

Based on the significant results in this study, interventions could be developed to enhance safer sex behavior among Thai MSM. Attitudes toward HIV/AIDS preventive, condom use self-efficacy, perceived peer norms, mental health problems, religious thought, and other essential psycho-social factors of sexual behavior should be emphasized in interventions that are designed to address HIV/AIDS preventive behavior. Moreover, focus groups of Thai MSM could be conducted to further explore various perspectives regarding high-risk sexual behaviors. This approach will also help to assure that socially sensitive intervention programs be developed for this vulnerable population.

P0301

Socio-economic Inequality in Mortality in Iran

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Socioeconomic inequality in health has been a major concern in public health. This study examined socioeconomic inequality in regional mortality and the impact on inequality by cause of deaths.

A nationally representative sample of 6000 dead persons from March 2004 to September 2004 was selected. The data were taken from the Ministry of Health and Medical Education conducted in 2004. We used a dichotomous hierarchical ordered probit model to develop an indicator of socioeconomic status of households. We assessed the inequality in mortality by using the odds ratio of infant mortality between the lowest and highest socioeconomic quintiles at national levels. Inequality measure based on the entire socioeconomic distribution Households' socioeconomic status was measured using principal component analysis. Mortality gradient by SEP for selected major causes of death in the population aged 0-49 years was examined using by quintile and rate ratio of mortality across quintiles. As a measure of cause-specific impact on inequality, the number of excess deaths from each cause in the lower four SEP quintiles compared with the highest quintile was calculated.

We found a decreasing trend in mortality rate in relation to socioeconomic quintiles. The poorest to richest odds ratio was 2.4. Furthermore, the inequality of mortality between the lowest and highest quintiles was significant and favored the better-off in most of the provinces. However, this inequality varied between sex, cause of death and distinct.

Socioeconomic inequality in mortality favours the better-off in the country as a whole. As well as its national average, it is important to consider the provincial distribution of this indicator of population health.This implies that in addition to reducing inequalities in wealth and education, investments in water and sanitation infrastructure and programmes (especially in rural areas) are necessary to realize improvements of inequality in cause of death across society. These findings can be instrumental for the recent 5 year Economic, Social and Cultural Development Plan of Iran, which identified the reduction of inequalities in social determinants of health

Keywords: Socioeconomic factors, cause-specific mortality, inequality, Iran.

P0302

Re-Understanding 'Three Delays Model' of Utilizing Obstetric Services in Indian Context: A Case of Allahabad District, Uttar Pradesh

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Greatest disparity for any public health indicators between developed and developing countries has been noted for maternal deaths. At country level, India has largest number of maternal deaths and shares almost one fifth of total world maternal deaths. Although maternal mortality ratio in India has declined substantially from 254 to 212 per 100000 live births but still there is long way to reach the set target of 109 by 2015 mainly because there exist wide disparities in maternal mortality at state level. According to recent estimates Uttar Pradesh still continues to be highest in MMR (359), which is 70 percent higher than the national average. Mainly because majority of births in Uttar Pradesh are still delivered at home without supervision of medically trained personnel. Data of NFHS-3 shows that 84 percent of women who had complications during their pregnancy did not want to deliver their baby in health facility either because they do not feel necessary to give birth in health facility or family did not allow them. These reasons altogether can be categories as delay at household level. Is that really true that women do not want to deliver their baby in health facility even during complications? This becomes important to understand in light of National Rural Health Mission, India (2005) which aim to reduce MMR 100 per 100000 live birth by 2012. Therefore, present paper aims to critically analyze the delays of utilization of obstetric health care services at different levels. For present study, complete house listing was carried out in six villages of Karchana Tehsil of Allahabad district, Uttar Pradesh to find out such currently married women who had faced complications at any point of their last pregnancy prior to two years of survey. As such 401 women were found. Selected statistical techniques like bivariate analyses, logistic regression analyses, chi square test and z-proportional test were applied to achieve set objective. It was found that only one third of women during their pregnancy complications were taken to health facility for treatment. Logistic regression analyses showed that utilization of obstetric services during obstetric complications significantly depends on utilization of antenatal care services, followed by level of birth preparedness and intention to become pregnant. Further, it was also found that majority of women during complications wanted to deliver their baby in health facility but due to perceived knowledge of delays at different levels they were compelled to stay at home. The direction of delays were also found opposite to the existing model of delays. Study suggests that there is an urgent need of transformation in existing public health policies and programme as women of the rural areas are prepared in mind to utilize services of health facilities.

P0304

Differences of Age, Sex, Occupation and Residence on AIDS Morbidity Rate; 2004-2010, Thailand

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This study was retrospective study, collecting surveillance data in 2004-2010 from Bureau of Epidemiology, Ministry of Public Health. Data were carried on four regions in Thailand, the Central (include Bangkok), Northeast, South, and North regions. AIDS morbidity analysis were used by Analysis of Variance and Post Hoc multiple comparisons mean difference by least-significant difference. Results showed that AIDS morbidity rates were the highest in age 30-40 years old and engage occupation in both male and female. Residence differences were statistical significant of AIDS morbidity rate. Morbidity rate was the highest in the North part of Thailand, followed by the Central (include Bangkok), South, and Northeast, respectively. Mean difference of morbidity rates were significant when compared in each regions for instance the Central and Northeast regions, the South and Northeast regions, the North and Northeast regions. It can explain in terms of characteristics, economic, social, community, culture, and risk behavior which related to patterns of HIV transmission vary in difference areas. However, AIDS morbidity rates were dramatically declined during 2004 to 2010 due to policy and campaign of condom used and risk reduction. Government should strengthen on knowledge, attitude, and practice of HIV/AIDS prevention, especially in the North part of Thailand.

P0305

Determinants of Owning Health Insurance Cards in the Northern Province of Vietnam

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Health insurance is a significant part of the Vietnamese health care system. The great merit of health insurance is increase access to health care services by poor and underprivileged households. According annual reports in 2010 of Ministry of health, the percentage of people in Vietnam have HI was 58.5% and 96.9% poor people and ethnic minorities was reported are having HI. This paper will describing the use of HI by ethnic and household income status and exploring correlates of owning HI in Thai Nguyen.

The data for the study come from a population based survey of the research project "Improved access, equity, quality and utilization of CHC services, in particular by women from poor, ethnic minorities and remote areas in Thai Nguyen" conducted by Institute of Population, Health and Development in collaboration with the Population Council. This survey sampled 2695 individuals more than 18 years old from 2490 households from May to June 2011. Data entry was conducted by Epidata. Descriptive analysis was used to explore the difference between groups such as: HI status and its use in medical care. A multivariate logistic regression model was then applied to identify the influencing factors and the level of association between ethnic and household income with HI status.

Qualitative results show that 68.57% people had HI and 31.43% did not. Among the population who had HI, 78.49% was compulsory HI and 21.51% was voluntary HI. The percentage of Kinh who had HI (63.11%) was lower than the percentage of Ethnic Minorities who had it (87.27%). In the last illness the percentage of people who had HI and used it was 78,48%. This study also showed that the main reason of people do not have HI was reported was "not having enough money" (40.57%). According to household income quintle, people in the richest household income quintiles were more likely to have HI than people in the poorest household income quintile, 74.43% of households in poorest income quitile had HI, 76.97% of households in richest income quintile had HI. A slightly higher proportion of Kinh reported bad health (22.53%) compared to ethnic minorities (20.57%). More than half (57%) of poor households self-reporting bad health, versus less than one-fifth (20.95%) of non-poor households.

Health insurance is a significant part of the Vietnamese health care system. Although the proportion of people using HI has increased, over 40% of Vietnamese population still does not have HI. Without a HI card these individuals are unable to access free health care coverage emphasizing the crucial need for the government to enhance awareness about accessing HI. This study examines why such a disparity exists. It also exploring whether these policies (measures) and health promotion programs of HI for poor and ethnic minorities are appropriate and effective.

Key words: health insurance, ethnic minorities, poor, Vietnam

P0306

Elimination of Specified Causes of Death and Gains in Life Expectancy in some Selected States of India

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Importance of various causes of death is measured by the gain in life expectancy when a specified cause of death is eliminated. Cause elimination life tables address the hypothetical question of what a cohort's mortality experience would be if a particular cause of death was eliminated. The objective of the present study is find out the gain in life expectancy after specific cause elimination on the implicit assumptions that the years lived at any age are of equal value and there are no interdependencies among the causes of deaths. Diseases of circulatory system have become a major cause of deaths in developing countries including India. Therefore, data of Medical Certification of Cause of Death in SRS, Registrar General, India (2003) of three selected states of India namely, Bihar, Rajasthan and Maharastra have been used to find out the potential gain in life expectancy after elimination of the disease. Preliminary results show that in 2003 the net gain in life expectancy at birth was higher among females than males in all the three states. Life tables are adjusted for the impact of differential risks of dying from other causes. The results of the study may have implications for practical decision making in setting up health goals, allocating resources and evaluating national health programmes.

P0307

Infant Mortality in India-Achievement and Future Challenges

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One of the goals of National Rural Health Mission (NRHM) in India launched in 2005 is to reduce Infant Mortality Rate (IMR) to 30 per 1000 live birth by 2012. The Government of India is committed to attain one of the Millennium Development Goals (MDGs) by reducing two thirds of mortality rate among children under five. In order to achieve the goal, two focused interventions included "institutional delivery" and "immunization" of the children.

Institutional delivery means delivery that take place in the hospital / health facilities. It by and large ensures pre-delivery, delivery and post delivery care, initiation of early breast feeding and vaccination of BCG and polio '0'. Similarly complete primary vaccination that prevents six preventable diseases among the children ensures the integrated performance of ASHA, Anganwadi Workers, Sub-centre, Primary Health Centre, Community Health Centre and District Hospital.

The aim of the paper is two fold. 1) to examine the effects of institutional delivery and complete primary vaccination of children on the infant mortality and 2) to examine the relationships of performance of different states in India regarding institutional delivery and vaccination coverage on infant mortality.

The present paper is based on Sample Registration System (SRS) data of 2009 published by Registrar General India (RGI) in 2011. SRS covered 1.5 million households and 7.18 million populations. The other sources of data include nation wide District Level Household and Facility Survey (2007-08) which covered 0.72 million households.

A correlation analysis was carried out to examine the variance explained by institutional delivery and immunization variables. Analysis indicated that IMR of India as a whole is 50 with a high disparity between rural (55) and urban areas (34). This means that every 6^{th} to 7^{th} death is an infant death in India. The highest infant death was recorded in the state of Rajasthan where every 4^{th} death is an infant death followed by three other larger states of Uttar Pradesh, Madhya Pradesh and Bihar. On the other hand many states of India reported ratio of infant death to the total death of all ages 1:40.

Further, correlation analysis showed that irrespective of socio-economic differences among the states, the infant mortality is declining in those states where institutional delivery and complete primary vaccination of children are significantly higher.

P0308

Child Mortality in High-Focus States in India: Accounting for Biophysical and Geographical Correlates using Geospatial Analysis

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This paper seeks to determine if, when controlling for socio-economic and the health care indicators, biophysical and geographical variables help to explain variation (or vice versa) in child mortality rate (under- five mortality rate) across districts of high focus sates in India. The literature on this subject is inconclusive precisely because the survey data, upon which most studies of child mortality rely, rarely include variables that measure these factors. Examples of biophysical and geographic factors often cited in the literature include the balance of rainfall to evapo-transpiration, the productivity of agricultural lands, topography, temperature, market access through road networks etc. This paper introduces these variables into an analysis of 284 districts of 9 high focus states in India.

The paper utilizes information on mortality indicator from recently concluded Annual Health Survey, 2011 and other socio-economic and geographical variables from different sources like Census 2011, DLHS RCH-3 (2007-08), Dept. of Economic & Statistics Divisions of concerned states etc.

Realizing the need for decentralized district-based health planning in India, the Annual Health Survey (AHS) has been implemented by the Office of Registrar General, India in all the 284 districts (as per 2001 Census) in 8 Empowered Action Group States (Bihar, Jharkhand, Uttar Pradesh, Uttarakhand, Madhya Pradesh, Chhattisgarh, Orissa and Rajasthan) and Assam (for a three year period) during XI Five Year Plan period. These nine states, which account for about 48 percent of the total population in the country, are the high focus states in view of their relatively higher fertility and mortality indicators. The fieldwork for Baseline Survey was carried out during July, 2010 to March, 2011. The survey provides first time in the country, the district level estimates on a set of child mortality indicators like IMR, U5MR, Neonatal Mortality Rate and Post Neonatal Mortality Rate besides other indicators in the mentioned high focus states.

Displaying high spatial dependence (spatial autocorrelation) in mortality indicator (outcome variable) and its possible predictors used in the analysis, the paper uses Spatial-Error Model in effort to negate or reduce the spatial dependence in model parameters.

The paper reveals that even after controlling the possible biophysical and geographical variables, the health program initiatives have major role to play in reducing under-five mortality rate. The coverage gap index (a mixed indicator of district wise coverage of reproductive & child health services), female education, urbanization, economic status, and the number of new born care provided in Primary Health Centers in the district are emerged as significant correlates of under-five mortality in the 9 focus-states in India.

P0309

Estimating Number of Centenarians and Civil Registration Completeness: A Case Study of Thailand

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This study aimed to estimate the number of population aged 100 years and over, and assess the quality of civil registration data on centenarians. Data were drawn from the 2000 population censuses, mortality data from the 2005-2006 Survey of Population Change (SPC), regional model life tables, and civil registration in 2010. Life expectancies of centenarian cohorts were derived from SPC life tables. Coale and Guo's model life tables of corresponding levels were applied to get survival ratios. These ratios were then applied to 2000 census population to estimate the number of still surviving centenarians in 2010. To assess the quality of registration data, in-depth interviews with centenarians/their relatives, sub-district/village headmen, and registrars in two provinces were conducted. The names and addresses of centenarians were taken from the civil registration. All centenarians recorded in two provinces were followed up by in-depth interviews.

In civil registration, there were 14,493 recorded centenarians in Thailand in 2010. This study found that there were only about 1,700 centenarians in 2010, which was accounted for only 12 percent of the number reported by the civil registration. Among these 1,700 centenarians, 1,200 were females and 511 were males. Our qualitative finding showed the registration exaggerated the number of centenarians as well. The registration recorded 429 centenarians in the two provinces. Only 61 of them were found alive. Most of these recorded centenarians had already died but their names were not discharged from the system. In addition to this, there were some recorded centenarians who were not 100 years old yet, which might due to mis-recording of age.

P0311

An Indirect Estimation of Life Expectancy at Birth and At Age One: With an Application to Districts in EAG States of India.

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Here in this study an attempt has been made to suggest a new methodology, based on regression approach to estimate the life expectancy at birth and also the life expectancy at age one *for districts of EAG states and Assam in India* using the following four simple demographic indicators namely: the crude death rate, the crude birth rate, the infant mortality rate and the proportion (or percent) of population aged 65 and above from annual reports of Sample Registration System (SRS) data. The basis of this methodology is adopted from a methodology which is earlier suggested by Bourgeois-Pichat (1983) for some other purpose but this has not been tried before for Indian situation.

This methodology is applied to estimate the life expectancy at birth for 2011 to the districts of EAG states and Assam in India utilizing the Annual Health Survey (AHS-2011) published results data under the Office of Registrar General of India.

The consistency and acceptability of the results obtained through this new method have been tested by comparing them with that of LEB that can be obtained using other methods which have also used the similar input in their development and result is quite good and acceptable.

P0313

How do Age and Causes of Death Contribute to Gender Differentials in Life Expectancy in Thailand?

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Thailand's life expectancy has been increasing over the last four decades. Higher life expectancy among women has observed across almost all ages than that of their counterparts men. However, the gender differential in life expectancy in Thailand has become narrow over the years. Previous studies indicate that this difference cause age pattern of mortality. Little evidence is found in the literature on how age and causes of death contribute to the gender differences in Thai life expectancy. Therefore, this paper tries to fill this research gaps by examining the factors that contribute to the gender differential in Thai life expectancy. The study uses Thai death registration data from 1960 to 2000. It employs Pollard decomposition method to predict the gender difference of life expectancy by age and causes of death. The results evident that gender differential in life expectancy have been reduced after 1970. The causes of this reduction are partly from age and another part due to causes of death. In 1960s gender difference has observed due to high infant mortality among males whilst in 2000 it was due to high old age mortality. The major cause for men's death in 1960s was due to violent but it has changed to cancer in 2000. These results suggest that Thai health policy need to be more focused reduce the gap of life expectance by reducing causes of male deaths especially on cancer.

P0314

Neonatal Mortality in South Asia: Trends, Differentials and Determinants

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Neonatal period, the period during first four week of life (the first 28 days) carry one of the highest risk of death in the history of human life. Every year all over the world, 130 million babies are born and about 4 million babies among them die in the first four weeks. More than one-third of the neonatal deaths in the world occur in three South Asian countries - India, Pakistan and Bangladesh. Among all these countries, India has the largest number of neonatal deaths primarily because of large number of births . The top ten countries of the world which contribute 67% of neonatal deaths are India (27%), China (10%), Pakistan (7%), Nigeria (6%), Bangladesh (4%), Ethiopia (4%), Democratic Republic of the Congo (3%), Indonesia (2%), Afghanistan (2%) and United Republic of Tanzania (2%)(Lawn et al., 2005, UNICEF,2004).

The objective of MDG (Millennium Development Goal 4) cannot be attain unless affords are made to reduce neonatal mortality especially during early neonatal period. The experience of neighbouring countries (Bangladesh, Nepal, Pakistan) also indicate more than 50% infant deaths in first week of life and about one-fourth on the first day of life. There are very few studies focusing on these two periods of life. It is thought that obstetrics care especially institutional delivery may have significant impact on early neonatal mortality. To understand role of maternal care factors in determining early neonatal mortality the dissertation proposes to study neonatal mortality with special focus on first day and first week.

All data used in this study are taken from Demographic and Health Survey of the respective countries (India, Bangladesh, Nepal and Pakistan)

Broadly it is observed that four factors have significant relation with the three indicators of mortality (i.e. on first day, first week and first month) 1.Institutional delivery has positive effect. 2.Female sex has negative effect. 3. Longer birth interval (2+) has negative effect. 4.Working mothers have high mortality of children.

- Antenatal care (3+) and Tetanus toxide injections (2+) which are important component of maternal health care do not show any significant relationship with mortality except in India.
- Education (Father's and Mother's) do not show consistent result on mortality.

P0315

Self-reported Health by Ethnicity and Gender in Thai Nguyen Province of Vietnam

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Vietnam has made great achievements in improving gender equity and equality as seen in progress toward achieving the MDGs. However, concerns of unequal achievement among various groups of population or regions remained. The concern is greater in the poor and mountainous areas, especially among the ethnic minorities, where women still have lower education and lower level of economic and social participation. This study is an attempt to explore differences in self-reported health of adult population by ethnicity and gender in Thai Nguyen – a northern province of Vietnam.

The study used data from a cross-sectional survey (N=2673). Self-rated health status was analyzed using multinomial logistic regressions. Smoking and eating fruit were considered as measures of health behavior that may affect health status. Analysis controlled for age, marital status, completed educational level, income of the respondents, and their urban or rural place of residence.

The results showed that the ethnic minorities and the Kinh reported similar health status. This finding is also correct when comparisons were made between each of the major ethnic minority groups and the Kinh. The higher infant mortality rate and higher benefits from the P-135 among the ethnic minorities may have contributed to this result. Nonetheless, it was also found that people living in the poor communes were less likely to report good health than people who live in the other communes.

Gender inequality in self-perception of health status was seen among both the ethnic minorities and the Kinh in the province. Males were more likely to report good health and less likely to report poor health compared to females.

Health status was also strongly associated to health behaviors. Those who ever smoked daily were significantly less likely to report good health than those who smoked less frequently or never smoked. Those who ate fruits more frequently were significantly more likely to report good health and less likely to report poor health. While the smoking rate among the ethnic minorities and the Kinh were similar, the proportion of the ethnic minorities used fruits on frequent basic was lower than that of the Kinh.

There is no difference in self-reported health status of the adult population between the ethnic minorities and the Kinh. However, findings of this study suggest that greater efforts are needed to achieve gender equality in health in Thai Nguyen. Promoting healthy behaviors, smoking less and eating fruits more frequently in particular, is strongly recommended to improve health of population in the province. Higher priorities should be given to promotion of frequent use of fruits among the ethnic minorities as they used fruits less than the Kinh while they can growth fruits easily for self-consumption at low cost.

P0401

Trends in Overweight and Obesity and Status of Chronic non- communicable Diseases and some Related Risk Factors among Egyptian Children and Adolescents

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The world is witnessing a worsening global obesity epidemic with levels rising at alarming rates in Low-and-Middle Income Countries (LMIC) The Middle East and North Africa region has the highest rates of overweight and obesity of the developing world with implications for the global disease burden and local health service capacity Objective is to study the current prevalence and trends in overweight and obesity among adolescents in Egypt from 2000 to 2008, to estimate the prevalence of glucose disorders, hypertension, Lipid profile, metabolic syndrome and to investigate some related risk factors among 10 to 18 years old school adolescents.

For evaluating trends in prevalence rates of overweight and obesity among adolescents, data from reports of other cross-sectional studies carried out by NNI (2000-2005) and EDHS, 2008 were compared. A randomized stratified multistage cluster-sample of preparatory and secondary school students was used. BMI was calculated and referred to corresponding international reference values for age and sex. A fasting blood sample was drawn to assess lipid profile and fasting plasma insulin.

Overweight and obesity are prevalent among Egyptian adolescents of both sexes, and at least for girls the prevalence has increased in the last few years. Pre-diabetic state was present among 16.4% of adolescents. The crude prevalence of hypertension is 1.4% The overall proportion of adolescents with high total cholesterol is 6.0 %; the proportion with high LDL-cholesterol is 7.5 %, with high triglycerides 8.2 %, and with low HDL cholesterol 9.4 %. This study also showed that obese are at more risk for dyslipidemia compared to non-obese, the risk is nearly the double. Those with high waist circumference; are even at more risk (nearly triple that of normal). High BMI explains 5% to 6% of amplitude of dyslipidemia among obese while high waist circumference contributes to 11% to 12%. The incidence of dyslipidemia among the obese can be reduced by nearly 50% if BMI is reduced to normal range and by 62-70% if waist is kept normal. The incidence of dyslipidemia among adolescents can be reduced by 17% to 19% if obesity is eliminated and by 6% to 8% if waist circumference in normal.

The problem of overweight and obesity appears to be emerging rapidly among this age group. Type 2 DM, hypertension and cardiovascular risk factors in young is serious in terms of morbidity and mortality suggesting that it may be appropriate target for screening. School-based programs promoting healthy eating, increasing physical activity and cessation of smoking are recommended for prevention of obesity and related diseases.

P0402

Impact of Obesity and Physical Inactivity on Fasting Blood Glucose, Lipid Profile and HOMA among Egyptian Children

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Objectives to study the impact of overweight and obesity on fasting blood glucose level and lipid profile among children, to test for the presence of insulin resistance among those with glucose and lipid disorders and to clarify the association between overweight, obesity in one hand and physical inactivity and bad dietary habits on the other hand.

A cross sectional study included 200 child aged 2 -12 years was done to screen for plasma glucose, lipid profile and insulin abnormalities. They attended the outpatient pediatric clinics of National Nutrition institute (NNI) for duration of 6 months throughout the year 2009. They were assessed by interview questionnaires, anthropometric measures (weight, height, waist circumference) and by measuring their fasting blood glucose and plasma lipid levels. Insulin resistance among children were measured by Homeostatic model assessment (HOMA) that was calculated using a computer-derived equation to assess body response to insulin among target groups.

Body mass index (BMI) differed significantly between boys and girls in the age range of 2 - to - 6 years old and females had higher values. Positive family history of chronic non communicable diseases (CNCD) was higher among families of obese children than those of non-obese. The risk for having high triglycerides and low HDL levels is more than double among obese children compared to non-obese. Physically inactive children have 7.8 times the risk for obesity compared to active children. Results also showed significant high percentages among obese as regards prediabetes state and insulin resistance reflected by HOMA- R. Comparing different cutoffs of HOMA-R and fasting insulin level in relation to fasting plasma glucose (FPG) categories, it was found that both parameters were higher in prediabetics than those with normal plasma glucose. Lifestyle factors such as physical inactivity was linked to BMI with significant results. Only about 14.5% of children with normal BMI compared to 27.7 % of obese children were consuming artificial milk. Nearly 63 % of the children consuming 2 snacks per day. The consumption of unhealthy snacks was higher than vegetables and fruits regardless of BMI. Sweets & ships where consumed on daily basis by about 2/3 of the studied students.

High BMI predisposes children to many of the medical complications of obesity found in adults, in particular components of insulin resistance syndrome: High HOMA -IR, dyslipidemia, and impaired glucose metabolism. As these children age, the obesity epidemic will lead to epidemics of diabetes and cardiovascular diseases (CVD). Health care providers of overweight children need to pursue efficient screening procedures earlier in the progression of overweight in order to prevent children from developing type 2 DM and cardiovascular diseases.

P0403

The Penomenon of Street Children in the Mena region: Cairo as an example.

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Street Children are a common sight in many cities in The Middle East and North Africa(Mena).There are mainly visible at busy street intersectionsin the front of supermarkets, mosques, banks and markets.There are usually aged less than 15 years and are mostly poor and face severe living conditions. Often street children carry out activities belonging to worst forms of child labour and such activities jeopardize the physical,mental and emotional development of the children. Street children are often marginalized, discriminated against ,and excluded in the society. Their rights to access education, health care and development are limited.

The recent studies show that the number of street children is increasing rapidly in many big Mena cities ,such as Cairo Alexanderia, Diniscuss , Aleppo ,Sanss and Tripoli (Lebanon). The numberof street children living and surviving in streets is becoming alarming in Cairo.Mena Child and Youth Initiative (MenaCYI) in collaboration with the National Council of Motherhood and Childhood conducted street children survey in 2009 to estimate the number of street children and to investigate their characteristics.The survey used the capture re-capture method, which was recently developed by Jensen and Pearson (2002) to estimate the size of street children.

The present study will use the findings of the street children survey to address the following questions:

What are the Characteristics of Street children in Cairo?
Why children are on street?
What they are doing?
What are the main difficulties facing them?
How effective are the interventions and programs
Implemented to improve the life os street children?

P0406

Socio-economic Inequalities in Underweight among Children in India Classified by Gender and Spatial Location.

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This paper examines socio-economic inequalities with respect to underweight among children across different regions of India by gender and spatial location. The study utilizes data from the National Family Health Survey (NFHS -3) 2005-06. The National Family Heath survey is the Indian Demographic Health Survey (DHS). Wealth index is used as a proxy indicator for socio-economic status of the respondents. In order to quantify the socio-economic inequalities, the concentration curve and concentration index are employed. Results indicate that the burden of child underweight is disproportionately concentrated among children from poor households. Results also show that while there is a noticeable spatial difference in the socio-economic inequality of underweight, the gender difference in the same is meager. Regions with high rate of underweight rate showed low rate of socio-economic inequality and vice versa. The concentration index (C.I.) value for underweight at the national level was computed to be -0.1880. The highest socio-economic inequality in underweight is calculated (C.I. of -0.2061) in South region where the underweight rate (32 percent) is the lowest. Similarly, the lowest socio-economic inequality (-0.1360) is calculated in Central region where the underweight rate is one of the highest (47 percent). This shows the negative association between underweight rate and socio-economic inequalities with regard to underweight. The study reveals that there is a huge urban rural difference in underweight. The highest urban-rural difference is reported in the East region. The concentration index value for Urban area in the East region is (-0.2321), while that of the rural area of the same region is (-0.0913), indicating a very high difference in the inequality of underweight itself. The concentration curve at the national level lies above the line of equality indicating that there is a greater socio-economic inequality with regard to underweight at the national level. The logistic regression results also indicate higher levels of inequality with regard to underweight in regions with better rates of underweight.

P0407

Understanding the Linkages of Household Environment, Asset Index and Child Survival in Urban India

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Often the household environmental factors are combined with the household assets in explaining the economic differentials in population and health parameters of developing countries. Though the utility of wealth index (that combines household environment with assets) in explaining health and health care utilization are established, its utility as a proxy of economic measures is contested. In this paper we attempted to differentiate the role of household environmental factors and the household assets in explaining the infant mortality (IMR) and the under-five mortality (U5MR) in urban India. We further examined the differentials in child survivals by type of urban localities, namely, the large cities, small cities and town. We hypothesize that there are no significant differences in IMR and U5MR among those households residing in poor living condition and those are asset poor in urban India.

We have used the data from the National Family Health Survey (NFHS-3), 2005-06, India, a population based large scale representative survey. Bi-variate analyses, principal component analysis, life-table technique and hazard model are used in the analyses. Two composite indices namely, an asset index based on consumer durables of the households and an index of living condition based on the household environmental factors are constructed. The indices are categorized as poor and non-poor based on the 50% of the median composite score.

Preliminary result shows that the correlation coefficient of asset index and index of living condition is weak. Further, there are no significant differences of IMR and U5MR among households living in poor environment and those are asset poor cutting across the type of urban localities and states. Results of cox-proportional hazard model indicate that the environmental factors have significant impact on child survival. It calls for improving the living conditions of the household in promoting child survival in urban India.

P0408

Infant and Child Mortality in Iran - Trends and Indexes (1956 -2021)

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As the national demographic structure is greatly affected by the mortality rate and trend and inaccurate data on the phenomenon will lead to inefficient decision making and planning, the mortality studies are of specific significance in the field of demography. The study of mortality process in developing countries such as Iran is facing at least four major challenges: there is no basic data, there is no time series, the statistical data are not of the same quality, and the estimation methods are different for different years. From among the methods for mortality rate estimation, W. Brass method and the methods based on the Brass views have shown to be the most efficient for studying the mortality time series. The Brass method draws on the fertility data; the mortality rate could be estimated based on the difference between the children ever born(CEB) and the children surviving(CS) in the 5-year age groups of women at the age of fertility. In the present study the main objective is to review the mortality trernds and indexes for children in Iran. The study data is from a number of national population and housing censuses, IDHS surveys, household social and economic characteristics surveys, Iran fertility surveys, population growth measurement surveys and 4 more national statistical surveys. In the study, the theoretical bases, the required data, the data collection history in Iran, as well as the assumptions and restrictions in the Brass method were reviewed; the review was followed by calculations to obtain a mathematical procedure to estimate the mortality rate of children based on the Brass method and the 4 equations inspired from it and by applying the logistic regression analysis. The estimation of mortality rate of children as well as the life expectancy by sex based on the logistic model for the years 1956 to 2021 are of the study's results. One more important result is that by recognizing the mortality specifications of the nation, the proper and accurate grounds for calculation and preparation of various life tables has been prepared. The study findings show that the mortality rate of children is on a downing trend, with a faster pace in the early years but gradually slowing down over years. The study manages to analyze the changes in mortality rates of children,life expectancy and the relation between the death probability of children and the age of mother.

P0409

Assessing "Urban Advantage" of Child Health in South Asia: Evidence from Bangladesh, India, and Nepal

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Urbanization is perceived as an indicator of socio-economic development in developing countries, as it is associated with increased educational and employment opportunities. Urbanization is also associated with improved healthcare facilities in urban than rural areas. However these "urban advantage" is not benefited equally within urban areas. Evidence shows that majority of these urban population resides in poor housing, water, and sanitation facilities, polluted environment, and under limited knowledge and access of healthcare services. South Asian countries show similar pattern as rapid increase in urban population of the region is due to massive rural-urban migration as well as natural increase within the urban areas. This calls a need to examine health status of urban population than their rural counterparts, the reality in many settings is that the urban poor are equally disadvantaged than rural population.

This paper examines economic inequality in child nutritional indicators (underweight, stunting, and wasting) in three south Asian countries namely - Bangladesh, India, and Nepal, using the most recent round of the country specific Demographic Health Survey. Child nutritional indicators are defined using WHO anthropometric measures.

At first, a wealth index is computed separately for urban areas for all the countries. This is done to resolve the rural/urban differentials in economic status of household. Wealth index is computed using Principle Component Analysis based on a set of selected indicators of household economic proxies. Descriptive statistics is used to understand the differentials in child nutritional status across the economic groups. Rich/poor ratio, concentration index, concentration curve are used to measure economic inequality. Multivariate analysis is used to examine the significant influence of economic status on child health. Finally, a decomposition analysis is used to understand the contribution of selected covariates in explaining the socio-economic differentials in child nutritional indicators in urban are of the countries.

Result shows stark differences in child nutritional indicators across economic status in urban areas of the countries. Moreover the malnourished children are concentrated among economically disadvantaged groups of urban area cutting across the countries. After adjusting other confounders, economic status of household is appeared as significant predictor of child nutritional indicator all the countries. It is observed that economic status contributed more than 30% in child nutritional status. The study demonstrates that the "urban advantages" of child health masks enormous disparities among economic groups in the south Asian region. It calls a specific attention to target economically deprived groups in urban areas of the countries. Moreover, to successfully monitor the gaps between urban poor and non-poor, existing data collection programs such as the DHS and other nationally representative surveys should be re-designed to capture the spatial economic variation.

P0410

Factors Influencing Feeding Practices of Under-2 Bangladeshi Children in an Urban Setting

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For developing countries malnutrition acts as a threatening factor for any kind of expansion. It is a condition resulting from faulty, inadequate or unbalanced nourishment. Poor infant feeding practice has adverse consequences for the health and nutritional status of children, which in turn have consequences on the mental and physical development of child. The purpose of this study was to assess children feeding practices and to determine factors influencing feeding practices in an urban setting.

Under cross sectional design a total of 400 mothers of children aged >24 months attending for immunization or other minor ailment in Outpatient Pediatrics Department of Bangabondhu Sheikh Mujib Medical University (BSMMU) of Dhaka city were selected purposively. Structured and pre-tested questionnaire was used to know socio-demographic information and feeding practice of children.

Age (months, mean±SD) of children was 8.4±6 months and among them, boy was 209 (52%). Mean age of mothers were 23±3.69 years and most of the mothers were in 20-24 age group. About 10% mother had no formal education and 88% were housewife. Monthly income of the family was $100(21-643). Ten percent mother did not feed colostrum to their children because of suggestion of others (24%), sickness of mother (24%) and superstition as thought impure milk (11%). About 28% mother gave prelacteal food to their children. Main reason behind this was suggestion of elder person (56%) and tradition (7%). Major prelacteal food given to the infants was honey (43%) as thought it protects cold and custom. About 64% children exclusively breastfed and 36% gave extra food because of insufficient breast milk formation (24%) and as well as mothers' perception that not enough breast milk formed (11%). Mean age of initiation of complementary food was 5.7±1.5 months. About 25% children took *khichuri* (hothpotch), 36% children took semolina with milk, 27% took rice and 23% took egg 7 or more times in a week. About 78% children were not taking fruits, vegetables and 88% were not taking any meat protein which were necessary for their optimal growth. Average intake of energy (kcal), carbohydrate (gm/d) and protein (gm/d), fat (gm/d) intake were 530(390-6336), 95(22-909.80), 12.93(7.20-316.80), 8.34(7.20-316.80) respectively. Practice of 'colostrum breastfeeding' was significantly associated with maternal education (p=0.006) and mothers' knowledge (p=0.0001). Maternal education (p=0.0001), monthly income (p=0.004), father education (p=0.002) and mothers' knowledge (p=0.0001) was significantly associated with practice of ‘prelacteal feeding’. There was significant relation between mothers' knowledge and practice of 'exclusive breastfeeding' (p=0.0001).

The major problems with infant feeding practice including rejection colostrum, discontinuation of ‘exclusive breastfeeding', improper complementary feeding and almost universal practice of prelacteal food. Maternal literacy, knowledge regarding feeding practices and sociodemographic factors need to be considered to improve the overall childcare practice.

P0411

Morbidities among Children of Poor and Non-Poor Households of Urban India

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Rapid urbanization has made the divide between poor and non-poor deeper. This has ramifications on child health between poor and non-poor households.

The study attempts to comprehensively understand the child health in the backdground of household environment and economic status of the household, while simultaneously investigating the factors responsible for the prevalence of morbidities among the children of poor and non- poor households of urban India.

The analysis is based on 5,019 children aged 0-4 completed years, included in the third round of India's National Family Health Survey, conducted in 2005-06. For children's health acute respiratory infection (ARI), and diarrhea has been considered. The study has categorized poor and non-poor households using the PCA which is performed following the classification of NSSO, for urban India. Accordingly, the first 26 percentile is considered as poor and the rest as non-poor households. An index of sanitation and an index of household air pollution have been computed using selected variables. For the preparation of index of sanitation, three informations have been used, namely sources of drinking water, water treated before drinking, and disposal of child's excreta. If the responses are positive then the household has proper sanitation facilities or otherwise. Similarly, for the index for household air pollution, again three informations have been used, namely use of safe fuel, use of modern stove, and chimney in the kitchen. If the responses are positive then the household is pollution free or otherwise. Bivariate analysis is performed to know the prevalence of morbidities and to visualize the condition of household environment. Logistic regression is run separately for poor and non-poor households to estimate factors.

The result shows that the prevalence of ARI and diarrhea is about two times higher in poor households than non-poor households. Regression analysis indicates that in case of diarrhea, children living in households where proper sanitation practices are not performed are about 1.53 times more likely to have diarrhea as compared to children living otherwise. Similarly, in case of ARI, children living in households where household pollution is present are 1.31 times more likely to have ARI as compared to child living otherwise. It is also found that a girl child is more likely to have diarrhea compared to male. There are at least five common factors for diarrhea in both poor and non-poor households, which are sex of the child, age of the child (3 to 4 years), proper sanitation facilities, more than five household members, and exposure to mass media. Similarly, in the case of ARI, there are six common factors namely sex of the child, age of the child (1 to 2 years), lower education of the mother, household pollution, Muslim religion, children belonging to scheduled caste categories.

P0412

Child Health: an Analysis of Low Birth Weight in India, 1992-2006

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A baby having birth weight less than 2,500 grams is called low birth weight (LBW). The sole aim of this study is to trace the trend of low birth weight of Indian children from survey conducted from 1992 to 2006. The low-birth-weight babies often face severe short-term and long-term health consequences. Low birth weight is a major determinant of mortality, morbidity and disability in infancy and childhood and also has a long-term impact on health outcomes in adult life. The size of child at birth is biological and greatly influenced by mother's social and bio-genetical characteristics. It is hard to trace the biology (genetical) characteristics at this level using this survey's data. Low weight at birth is associated with increased risk of various ill health outcomes in childhood, as well as in adulthood. The ideal source of birth weight data in the form of birth certificates or hospital discharge do not exist in India. This influenced by various socio-cultural dimensions. Present paper is having three objectives: (1) to examine the trends of children having low birth weight in India states during 1992-2006. (2) to understand the socio-economic inequality patterns of low birth weight children. (3) to examine the effects of socio-economic disparities on low birth weight among Indian children. The dimension like rural urban, caste, region belongingness, religion, mother's education gender of the child and birth order have been analysed in the present study to trace the pattern and trend of low birth. NFHS-1, NFHS-2 and NFHS-3 are utilised. Binary regression technique has been applied for the analysis. It is found that the percentage of low birth weight children among poorest wealth quintile is increases from 46% (NFHS-1) to 53% (NFHS-2) and 47% (NFHS-3), no consistence pattern has seen. Among the no educated mother the percentage of LBW children is 44.44%, while 28.68% in higher educated mother. The children of mother with secondary educational attainment are 25% less likely to have low birth weight in comparison to "no education" at 1% of significance level in 1992-93. Rajasthan, a state of India, is having highest number of low weight at birth children in NFHS-1 with 60% while in NFHS-2 it is Uttar Pradesh with 54%. Richest people are 30% less likely to have LBW than poorest in NFHS-3. Among scheduled caste children the LBW is 39.91%, 38.81%, and 38.56% during NFHS-1, NFHS-2 and NFHS-3 respectively.

P0413

Does India Need to Re-look at National Immunization Programme? An Analysis from DLHS-III

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Immunization is one of the most cost-effective interventions to prevent a series of major illnesses among children. Special focus on 'reduction of child mortality' in Millennium Development Goals (MDG) has made the world conscious about the prevention of diseases and care of the child. The six serious but vaccine preventable childhood diseases are measles, tuberculosis, diphtheria, Pertussis (whooping cough), tetanus and poliomyelitis. Children are considered to be fully immunized if they receive one dose of BCG (Bacille Calmette Guerin) against tuberculosis and measles vaccine along with three doses of DPT (Diphtheria, Pertussis, Tetanus) and poliomyelitis (polio) vaccines.

As part of the National Health Policy, the National Immunization Programme is being implemented on a priority basis. The Government of India initiated the Expanded Programme on Immunization (EPI) in 1978 with the objective of reducing morbidity, mortality and disabilities among children from six vaccine preventable diseases. The Universal Immunization Programme (UIP) was introduced in 1985-86.

Despite a long standing national programme for universal immunization in India, poor coverage and multiple inequalities in immunization continue to exist.

The present paper will envisages understanding the reasons and factors associated with low achievement of full immunization coverage among the children below 2 years of age. For the present study, data from District Level Household Survey-III have been analyzed. For the present context, bi-variate and multivariate analysis has been performed.

At the national level, the proportion of children receiving full vaccination was 54 percent. Eleven percent children not immunized at all and 34 percent receiving only some of the recommended vaccines. This shows that though a substantial number of children started out on the vaccination schedule but were not completing the recommended schedule of vaccines. This has brought down the overall coverage of full immunization in India. The paper shows that a correlation between gender, residence of the children and full immunization status. More male and urban children are comparatively fully immunized than their counterparts. There is a high degree of inequality in immunization between children from rich and poor households, richer being more fully immunized. It reflects the fact that even though the immunization coverage may be improving, it is more concentrated to the better sections of the society, residing in the urban areas and among the males.

The lack of awareness with respect to the importance of immunization, lack of facility, poor supply of vaccines, misconceptions regarding the effect of the vaccines key reasons for not immunizing the children. The Binary Logistic Regression revealed that parents' education, distance from the health facility and media exposure of the family members has significant role to play in full immunization of the children.

P0414

Households Attribute and Admittance to Improved Drinking Water and Sanitation: Linkage with Child Morbidity in India

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Sustainable access to safe drinking water and sanitation are essential to the well-being of humankind, a vital input to socio-economic development. Clean water for domestic purposes is essential for human health and survival; indeed, the combination of safe drinking water, adequate sanitation, and such hygienic practices as hand washing is recognized as a precondition for reductions in morbidity and mortality rates, especially among children. Hygienic sanitation is a basic necessity of a community. The most common childhood morbidity associated with contaminated water and unhygienic sanitation is diarrheal morbidity. Diarrhoea disease alone accounts for almost one-fith of all deaths (or nearly 535,000 annually) among Indian children under 5 years of age (Boschi-Pinto,K.Shibuya, 2008). In the context of childhood morbidity, household access to safe drinking water and hygienic sanitation play a significant role in India.

Objectives:

- To understand the access to improved drinking water, and hygienic sanitation by households in India.
- To examine the prevalence of diarrheal morbidity among children and the impact of drinking water treatment by household on diarrheal morbidity among children in India.

This paper focused on the household environment and access to improved drinking water and sanitation and its association with child morbidity in India. Data have been used for this study obtained from the District Levels Household Survey (2007-08). To accomplish those objectives Bi-variate and Multivariate analysis and cross tabulation has been carried out for this study.

The results of this study reveal that only 70.3 percent households have electricity and households' access to toilet facilities is very low that is only 49.3 percent all over India. Child morbidity is positively related with household characteristics. All over India only 35.5 percent people lives in a Pucca house. Results also reveal that the child belongs to the household who access the piped and tap water relatively lower chances of suffering from diarrhoea than households who access other sources. Results from Bi-variate and Multi-variate analysis show that child belongs to the households with protected sanitation facilities have 8 percent less likely to have diarrhoea. Child belongs to rich household wealth quintile have 1 percent less likely to suffered from diarrhoea. Similarly child belongs to Muslims and Others castes groups have relatively higher chances of diarrhoea than the child belongs to Hindu castes. Types of resident, religion, protected sanitation facilities, improved source of drinking water, household wealth quintile have positively associated with child morbidity. Lacks of household access to improved drinking water and sanitation facilities, low socioeconomic status have positively associated with child morbidity. Hence there is an urgent need to build awareness about hygiene and sanitation and also need to provide them adequate accessibility and utilization of improved drinking water and sanitation facilities.

P0415

Differentials of Infant and Under-Five Mortality in the Sudan and Its Association with Development and Armed Conflicts: Results from the Sudan Household Health Survey (SHHS).

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Infant and child mortality has been long reflections of community health status and hence the level of development and welfare. During the past two decades, different geographical parts of Sudan were arguing the inequality of services distributions and some of them embarked on military movements. This study aimed to estimate level of infant and children less than five mortality in different Sudanese states and to assess whether these rates were associated with level of development and armed conflicts.

The paper is based on the (SHHS), which was conducted in 2006 and covered all states of Sudan even the troubled of it. The sample for the (SHHS) was designed to provide estimates on MDG's indicators. From each state a sample of 1,000 households was drawn for the survey. Also additional secondary data on the economic growth were utilized from the Central Bureau of Statistics. The data were analyzed statistically using the Statistical Package for Social Sciences (SPSS). The analysis involved frequency distributions and correlations; Chi-square test for independence as well as logistic regression were conducted.

The results showed that there a is appositive significant correlation between under-five mortality and the level of development in the Sudanese States. The estimates of neonatal, infant and under-5 mortality rates were lowest in Central Sudan (NMR: 27; IMR: 52; U5MR: 63) and highest in Western Equatorial State (NMR: 69; IMR: 151; U5MR: 192). Ten of the states (90% of them witnessed armed conflicts) had NMR higher than that of the national average whereas 12 States (80% of them witnessed armed conflicts) had the IMR and the U5MR higher than that of the national average.

The study recommends improving of child health in the remaining part of Sudan and bridging the gap of development between different Sudanese states, especially marginalized and bordered states.

P0416

Convergence and Divergence of Gender Differential in Child Mortality in India's Demographic Transition

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Life expectancy is an hypothetical measurement used to represent the health aspect in computing Human Development Index. Amartya Sen in his research highlighted that about 100 million women were "missing" in parts of the developing world (South Asia, China, West Asia and parts of North Africa) as the female mortality rates were higher in these parts compared to the males indicating discriminatory behavior towards women. This essay aims to focus on gender differentials in life expectancy in India over this century.

First we look at the divergence or convergence in the gender differential in child mortality in India as the demographic transition progresses. Then we look at the male and female life tables are calculated in Mort pack software with the help of age specific mortality rates from Sample Registration System, 2002-2006 for 15 major states in India. The West Model of Coale and Demeny table which has paired male and female tables are used to estimate expected female mortality. This expected female under five mortality is used to calculate expected female life expectancy for all the states of India.

The child mortality declines in India proceed in demographic transition. Female mortality remains high and contributes towards fertility transition in India. Looking at the regional variation we see that in southern states like Kerala and Tamilnadu women enjoy the female advantage in life expectancy while states which are under-developed this female advantage in life expectancy is absent (Eg, states like Bihar, Uttar Pradesh and Orissa). From our findings we see that states like Haryana, Punjab, Uttar Pradesh, Madhya Pradesh and Bihar has higher childhood mortality compared to over five female mortality.

This calls for verifying if regional development indicators are important in gender differentials in life expectancy though it may have an effect on levels.

P0417

Understanding the Association Between High-Risk Fertility and Childhood Mortality in India

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Infant mortality is one of the health indicators which largely vary within and across the countries. Extant of literature showed a number of determinants of infant mortality varying from socio-economic to demographic to healthcare practices. But there is a dearth of literature showing the association of infant mortality with risky fertility behaviours. In India, majority of women marry during their adolescence. These women are exposed to early childbearing as the use of family planning method is very limited in the country. These early childbearing bearing is often considered as risky fertility behaviour due to physical immaturity and limited use of healthcare practices. It may influence infant mortality in the country which needs to explore.

Accordingly, present study examines the association between high-risk fertility behaviour and childhood mortality (Infant and under-five mortality) in India using the data of third round of National Family Health Survey which is conducted during 2005-06. The indicators of high risk fertility behaviour are – low age at birth, short birth interval, higher birth order and combination all these three factors.

Descriptive analysis is used to understand the differentials in childhood mortality (infant and child mortality) across selected contextual factors along with high risk fertility behaviour. Mortality is estimated using life-table survival approach. Cox proportional hazard model is used to understand the significant association between high-risk fertility behaviour and childhood mortality after adjusting other contextual covariates. We have examined the interaction effect of combinations of high-risk fertility behaviour in order to find out the most vulnerable groups.

Preliminary result shows that about 50 percent of total births in the country were under any high-risk category which is avoidable. Infant mortality profoundly varies with age of mother, birth order, and previous birth interval. For instance, infant mortality is substantially higher – among adolescent mother, higher birth order children and with lesser birth interval period. Similar variation is observed with under-five mortality. After adjusting other factors, high risk fertility behaviour is significantly and negatively associated with infant and under-five mortality. Along with high-risk fertility behaviour, educational and socio-economic status of mother is also associated with the childhood mortality in the country.

The findings show that all categories of high-risk fertility are significantly and negatively associated with childhood mortality. However majority of this death are avoidable with specific interventions. For example, there is need of enforcement of legal age at marriage to minimize the infant death of adolescent mother. At the same time specific effort is required to encourage the adaptation of family planning methods to increase the gap in birth-interval in the country.

P0418

High Levels and Glaring Inequalities: A Study of Child Undernutrition in Odisha, India

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High level of child undernutrition has been an important policy issue in developing countries. However, high levels with glaring socioeconomic inequalities in child nutrition pose a challenge to the development of India and many of its constituent states. Odisha is such a state, well-known for extreme poverty and ill-health of its population. Besides, socially backward groups like Scheduled Caste (SC) and Scheduled Tribe (ST) constitute a substantial proportion of the total population of the state. Spatial and social group inequalities in overall development are conspicuous which must have effect on inequalities in child undernutrition. Several programmes including ICDS have been in operation to improve this situation. Besides, India has achieved a fairly high rate of economic growth since the introduction of the new economic policy in the country way back in 1991. These policies and programme must have had some effect on child nutrition in the state.

Has child nutrition in the state as a whole and in various groups improved over time? Are inequalities still persistent? As such this paper tries to assess the changing trends of social inequalities in underweight, stunting and wasting among children below three years in Odisha. In doing so, data from the three rounds of National Family Health Survey (NFHS) have been analysed by employing logistic Regression models. Findings reveal a persistent high level of child undernutrition though there has been a minor reduction. Inequalities across socioeconomic groups are conspicuous. Logistic Regression Models revealed a prominent and increasing effect of economic status of the household on child undernutrition.

P0419

Child Malnutrition: A Comparative Study Between Slum and Non Slum Area in India

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Health is a positive concept emphasizing social and personal resources as well as physical capacities. Better health is vital to human happiness and well being. It also makes an important contribution not only to economic development but also towards a more productive and more saving nation as healthy population lives longer. Besides, the health of the children takes much significance as healthy children become healthy adults. Now a days the rapid process of urbanisation in the developing countries lead towards the development of slums, which create a health inequality in urban area. In particular, the non slum dwellers enjoy better health status than the slum dwellers

The specific objectives of this study are as follows:
1. To find out the roles of various socio economic and demographic factors and in particular, the residence in slum on child nutrition.
2. To obtain the differential impact of various socio economic and demographic factors on child nutrition between slum and non slum area.

The Study is based on the data from National Family Health Survey -III (NFHS-III). The analysis is made using the information of children below five years of age from the children's file of the NFHS-III.

There are two types of variables used in the study namely independent variable and dependent variable. The independent variables are the socio economic factors and the dependent variables are the nutritional indicators such as stunting (height for age) and Underweight (weight for age) which are taken dichotomous or in Yes /No form.

The method such as cross tabulation was adopted to explore the relationship between two variables by organising a bi-variate table. Later Binary Logistic Regression was adopted to show the effect of a particular variable controlling for all other variables.

The findings of the study suggest that, the children belonging to slum area are more likely to malnourished than the children of the non slum area. Besides, at the same level of socio economic and demographic factors, slum children are found more undernourished than the non slum children. Thus, the residence in slum found to have a significant impact on child nutrition

P0420

Early Neonatal Mortality in India: Its Trends, Determinants and Inequalities

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In order to achieve India's Millennium Development Goal-4 for child survival, India needs to reduce its under-five and infant mortality rate by two-thirds between 1990 and 2015. But according to latest 2010 MDG evaluation report it is not possible for India to achieve the goal because both under-five and infant mortality rate continued to remain high as the rate of reduction is very slow. The report particularly emphasizes the need for the reduction in early neonatal deaths since it constitutes more than 51 percent of total number of infant deaths in 2008. Currently a large portion (66%) of infant deaths occurs in neonatal period and again majority of neonatal deaths (77%) comes from early neonatal period (SRS, 2010). Therefore, a faster rate of reduction in infant mortality rate can only be possible through a higher rate of reduction in early deaths. So, in this backdrop this study examines the trends, determinants and inequalities in early neonatal mortality rate in India using SRS and NFHS data sources.

Objectives:
I. To study the levels, trends in early neonatal mortality rate and its age pattern of deaths.
II. To study the determinants of early neonatal mortality and its inequalities.

Methodology:
i. Bivariate Analysis (cross tabulation)
ii. Multivariate Analysis (logistic regression and predicted probability of dying)
iii. The socio-economic inequality in early neonatal mortality is measured by concentration index and Wagstaff's decomposition technique is used to find out the determinants of inequalities.

The results show that the present level of early neonatal mortality rate in India is very high (27) and its share in neonatal mortality rate has already reached to more than 70% and in some states to more than ninety percent showing its dominance in neonatal mortality. During the last three and half decades (1972-2008) the percentage reduction in early neonatal mortality rate was very slow compared with the reduction in post neonatal mortality rate and in late neonatal mortality rate. The age patterns of mortality during early neonatal period are unevenly distributed and this pattern has remained the same over the three rounds of NFHS with the highest risk of dying in 'day zero'. The probability of dying was higher among newborns of very small birth size and born to old age mothers, born in other religion and living in unhygienic environment and the probability of dying was lower among newborns born to mothers who were taking full antenatal care and having at least secondary education. The inequality analysis shows that early neonatal deaths are concentrated among the poor population and the main determinants of the inequalities are women's illiteracy, non utilization of antenatal care, poor economic status and residency in rural areas.

P0421

Parental Child Marriages and Childhood Undernutrition in India: A Cross-Spousal Analysis Using a Nationally Representative Data

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Undernutrition is a major health burden among children and adult in India. The risk on childhood undernutrition is perpetuated through the operation of an array of risk factors including nutritional, socioeconomic and environmental characteristics. A few studies have attempted to establish causal linkages between childhood undernutrition and maternal child marriages. However, there is no clear understanding regarding the plausible association between parental child marriage and childhood undernutrition in India.

The objective of the present study was to examine the influence of parental child marriages (*marriage below legal ages*) on childhood nutritional status in India.

The study population was a nationally representative cross-section sample of singleton children (*n*=16756) who were aged 0 to 59 months from the 2005-2006 Indian National Family Health Survey. Modified logistic regression models that account for multistage survey design and sampling weights were applied to estimate the association between parental child marriages and childhood undernutrition. The outcome measures were child underweight and stunting; parental child marriages (<18 yrs among mothers & <21 yrs among fathers) was the primary exposure variable.

In the mutually adjusted regression models, we do not find any significant association between parental childhood marriage and child underweight [underweight OR: 1.06 (95% CI: 0.98-1.15) and 1.03 (95% CI: 0.94-1.12) for early married mothers and fathers respectively]. However, in case of child stunting, we found children born to early married mothers were significantly more likely to be stunted [stunting OR: 1.11 (95% CI: 1.03-1.21)] than their counterparts. However, we do not find any significant association of childhood stunting with early married fathers [stunting OR: 1.07 (95% CI: 0.98-1.17)].

The null findings between the association of parental child marriage and childhood underweight indicate that early age at marriage of parents may not explain childhood undernutrition in India.

P0422

Infant Mortality in India and Its States during 1992-93 to 2005-06: Does Difference among Different Economic Groups Narrowed Down?

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Socio-economic inequalities impacts population health as evidenced particularly in child mortality indicators in India. Programs have been developed for measuring socio-economic inequalities, implementation of child survival programs which bridge socio-economic gap and continuous monitoring of these inequities in child health. Even then the infant mortality rate has not recorded a sustainable change in the last decade. There is a necessity to unravel and quantify the contributions of infant mortality determinants to measured socioeconomic inequality in infant mortality. The main focus of the paper is to quantify the determinants' contributions of socioeconomic inequality and identify the necessary policies and programs to address the root causes of existing inequality of infant mortality in India. To accomplish the objectives, the decomposition of socio-economic inequality is done for infant mortality indicators from 5 states of India namely-Tamil Nadu, Maharashtra, Gujarat and Uttar Pradesh. The states are selected by comparison of Human development indicators of India of 2006. Using NFHS-I, NFHS-II and NFHS-III data, concentration index is used as a measure for decomposition of socio-economic inequalities at state and India level. The expected findings are that the largest and important contributors to inequality in infant mortality will be owing to household economic status, birth interval, mother's education and employment. Residency in rural/urban areas and hygienic status of toilet might also prove to be important contributors to the measured inequality. Inequality of Infant mortality varies between lowest and highest quintile within state as well as across state level in the same wealth quintile. States like Uttar Pradesh have show skewed rates of infant mortality as per wealth quintile. However, states like Gujarat which is less developed according to human development indicators have less skewed infant mortality rates across wealth quintiles as compared to Maharashtra. Socio-economic inequity and inequality can be assessed and addressed but the question arises on how to address the determinants of socio-economic inequality to achieve a sustainable decline in the infant mortality rates in India. This implies that in addition to reducing inequalities in wealth and education, investments in employment generation, housing, water and sanitation infrastructure and programs (especially in rural areas and urban slums) are necessary to realize improvements of inequality in infant mortality across states in India.

P0423

The Analysis of the Causal Relationships between Consanguineous Marriage and Infant Mortality in Turkey

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Turkey is one of the countries distinguished with high level of infant mortalities and consanguineous marriages. Turkey has had a high level of infant mortality according to its economic level for many years. The infant mortality rate, which is 163 per thousand in the mid-1960s, fell to the level of 121 per thousand in the early 1980s and to the level of 66 per thousand in the early 1990s. With the years of 2000 both infant mortality rate and under-five mortality rate began to decline even more quickly. The infant mortality rate has decreased to the level of 17 per thousand at the end of the 2000s. Consanguineous marriages remain to be common in Turkey. According to the results of latest Demographic and Health Survey, TDHS-2008, 24 percent of women had a consanguineous marriage. Results of the same survey show that 26 percent of babies, who born in the last five years preceding the survey is born to consanguineous marriages and 68 percent of them is born to marriages with first-degree cousins. Numerous studies conducted in various countries of the world indicates that consanguineous marriages, especially first-degree consanguineous marriages had the effect of increasing infant mortalities. In Turkey, despite the high level of infant mortality and consanguineous marriages there are few descriptive studies on the relationships of consanguineous marriages and infant mortalities. In this study, using survival analysis method and controlling all possible variables, it will be analyzed whether consanguineous marriages have infant mortality enhancing impact or not. To accomplish this goal, contrary to the previous studies using just one data set, four data sets of demographic surveys conducted by Hacettepe University Institute of Population Studies (1993, 1998, 2003 and 2008 Turkey Demographic and Health Surveys) will be used in combination by merging all of them. The method of data merge will be a methodological innovation and number of observations and reliability of estimates will be increased. This data base, in addition to birth and death history of babies includes marriage history and attributes related with the construction of the marriage, and also includes a rich data set about all variables related with above-mentioned factors.

P0424

Tourism and Child Beggary: The Ambivalence of a Vital and Strategic Relationship. A Comparison of Bangkok and Mumbai.

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The image of the interaction between international tourists and local beggars is a strong mark of globalization as it represents a split between two worlds. On one hand, the tourist symbolizes the cosmopolitan establishment that can move effortlessly across geographical boundaries. The other world, represented by the beggar, refers to social exclusion and a monotonous street life (Bauman, 1998). Tourism reconfigures the traditional nature of the begging interaction. Urban begging has often been described as humiliating since the passersby are indifferent towards beggars (Lankenau, 1999a), this situation is referred by Goffman (1963)as a nonperson treatment. In response, beggars enhance their image by building relationships with bystanders who become a source of social, psychological and financial support (Lankenau, 1999b). The latter situation does not apply to our setting which is not characterized by indifference; it relies on a unique cross-cultural interaction. More than never begging becomes a scheme that requires expertise, emotional control, identity management and dramatization skills (Lankenau, 1999b) . This research focuses on communities where begging is based on child participation with a view to understand the determinants of child begging, explain the tourists' perceptions and reveal the impacts on family structure, education, and socialization. I have chosen a cross-cultural approach comparing fields from Bangkok and Mumbai combing ethnography and Grounded Theory. I consider that Grounded Theory has the potential to lead to better ethnography (Timmermans & Tavory, 2007). The data collection is based on participant observation conducted over a period of two years, and on a psychometric scale named "begging scale» created in order to measure the stigmatization of beggary. We will demonstrate that the begging encounter is a construction aimed to gain the tourists' sympathy. We will describe how the children stage their own identities in order fit in the tourist's stereotypes on beggars and vulnerable children.

P0426

Promoting Neo-Natal Health is a Pre-requisite for Infant and Child Mortality Decline in India: An analysis from NFHS 3

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Children are often the first and most common victims of human rights violations, violence, disease, malnutrition, and death. Regionally, children differ in their general health, nutritional status and exposure to communicable diseases and these regional differences determine the type of health interventions needed. High neonatal death rate in India is a serious concern delaying the demographic transition process. Therefore, an attempt is made to examine the need for improving neo-natal health of children as a path leading to infant and child mortality decline considered a demographic credential for India. Hopefully, the study will suggest child-specific, effective and coordinated interventions for infant and child mortality decline.

The major data sources include NFHS 3, National Population Censuses, Vital Registration System, Sample Registration System, Family Welfare Year Books, some demographic and mortality reports published. Neonatal health indicators include clean or safe delivery, prevention of neonatal tetanus, management of asphyxia, management of pre-maturity and management of infection. Logistic regression model is attempted to examine the net effect of background variables on neonatal health status.

Though infant mortality decline is clearly noticed in India, neonatal death rate remains to be high. In 2008, the neo-natal mortality rate was 35 per 1000 live births, about 20 percent of infant deaths occur during neonatal period. Neonatal natal causes are equally responsible for infant and child mortality. The high neonatal mortality situation is examined in relation to some determinants of neonatal health like safe delivery, birth weight of the baby, immunization of neonatal tetanus, etc. for which health care services are also available. But the extent of utilization of services is not up to the mark. In 2008, the percentage of Institutional deliveries was 47.1, 21.9 percent were assisted by qualified persons other than hospitals and the percent born below normal weight and the percent who were immunized for neonatal tetanus were not more encouraging. Therefore, the children are still in the clutch of death risk factors. Logistic regression has proved the effect of background variables on the use of health care services.

Provision of quality health care services and better utilization of these services are more viable strategies. Some strategies could be framed to cause more favourable attitude and behaviour change among the target population and the modification in service delivery system leading to better health utilization coverage particularly during neonatal period.

P0427

Levels and Determinants of Infant and Child Mortality among the Poor Households in India

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This study uses data from the "National Family Health Survey (NFHS-3) 2005-06" to investigate the predictors of infant and child mortality among poor households in India. The cross tabulation, life table survival estimates and Cox proportional hazard model techniques have been used to estimate the predictors of infant and child mortality. The life table survival estimates for infant and child mortality shows that infant mortality in female child is lower in comparison to male child but with child mortality, the rates are higher for female in comparison to male child and the Cox proportional hazard model also give highly significant in female in comparison to male child. The infant and child mortality rates among poor households highest in the Central region followed by North and Northeast region and the lowest in South region in comparison to all regions of India. Education of respondent has been found a significant characteristics in both analyzes, further birth interval, respondent occupation, caste/tribe and place of delivery has substantial impact on infant and child mortality among poor households in India. Finally these findings specified that an increase in parents' education, improve health care services and improve socioeconomic conditions of poor households which should in turn raise infant and child survival and should decrease child mortality among poor households in India.

P0501

The First Palestinian National Survey on Migration, Implementation Experience and Learned Lessons

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Migration survey 2010 is the first specialized national survey on migration that conducted in the Palestinian Territory. The survey aimed to provide detailed and accurate statistics about internal and external migration in terms of size, characteristics and trends of migrants, money transferred by migrants, factors that influence the decision of emigration, the characteristics of returned emigrants and the reasons behind their return. The survey aimed to fulfill the urgent need for migration indicators in the light of the lack of data in migration statistics in general and particularly in international migration statistics.

The survey also aimed to provide basic information on migration in the Palestinian Territory to help decision makers in the formulation, monitoring and evaluation of migration policies as well as population policies and population programs.

Survey Operation
Preparatory Stage
The migration survey 2010 in the Palestinian Territory was the first by its nature that conducted by PCBS. Statistical Beareu has given the migration survey special interest, because of the urgent needs for migration data. It is worthily mentioned that this survey is the first in the Arab region.
PCBS started the preparation to conduct the migration survey in 2009. A national committee was formed including a representative PCBS, UNFPA, local universities and other relevant ministries and institutions

During the preparation stage, PCBS examined the standard migration questionnaire that was developed by MEDSTAT in cooperation with member states. In addition to that, PCBS conducted a national workshop to discuss with stakeholders and main beneficiaries the content of the proposed migration indicators.

Survey's Questionnaire
1. Household Questionnaire: 2. Emigrant's Questionnaire: 3.Returned Emigrant's Questionnaire: 4.Non-immigrant's Perception towards External Migration:

Targeted Population
The targeted population of the migration survey - 2010 includes all persons in the Palestinian Territory (West Bank and Gaza Strip).

The survey was based on stratified cluster targeted sample design using a two-stage method for the selection of surveyed households.

The sampling frame consists of enumeration areas that were used in the Population, Housing and Establishment Census 2007. Each enumeration area consists of inhabited housing units. The enumeration areas were used as Preliminary Sampling Units (PSUs)

The sample size of the migration survey was 15,050 household distributed as 9,900 household in the West Bank and 5,150 in the Gaza Strip.

P0502

Chinese in Egypt

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Chinese people in Egypt form one of the smaller groups of overseas Chinese; however, they are a very diverse community with a history reaching back for over a century. Chinese population in Egypt is composed of students, especially Muslims who study at Al-Azhar University, migrant workers, and traders and entrepreneurs. The objectives of this study are to track the migratory history of Chinese to Egypt, and to shed some light on their demographic profile. In addition, the study aims at exploring Chinese migrants' interaction with the Egyptian community with the existence of mixed marriages and their involvement in the economic and social life in Egypt.

P0503

Transnational Migrant Links - Evidence from the Northern Territory, Australia

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According to the Australian Standard Geographical Classification, the Northern Territory (NT) is remote and in common public conscience elsewhere in Australia it may appear not as well internationally connected as the rest of the country. International migrants represent nearly 14 per cent of the NT's population (2006 Census) but scant research has addressed the transnational connections of the NT population. In 2008 twenty-five immigrants living in Darwin and Alice Springs, including some from Asian countries, were interviewed as part of a larger project investigating settlement and mobility patterns of international migrants residing in the NT. This paper discusses the motivations, frequency and modes of personal overseas connections of these migrants. It also looks at the content of communications and values that immigrants attach to personal overseas connections. The results illustrate the willingness of immigrants to maintain personal overseas connections. The individual circumstances of migrants and the situation of their families and friends overseas are illustrated to be important determinants of maintaining personal overseas connections. However, the ways and frequency of staying in touch appear to be influenced by the age and the length of residence of migrants. Overall, the interviewed immigrants appear to maintain rather dense, wide-spanning transnational connections. This may suggest that living in a peripheral area such as the NT does not hamper maintaining personal overseas connections in any major way and that in spheres such as transnational social life such areas are less isolated than the Australian Standard Geographical Classification would suggest.

P0504

Remittance Behaviour among Indonesian Migrant Workers in Sabah, Malaysia

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Malaysia is both a country of origin and destination for migration especially among the labour migrants both documented and undocumented. According to The World Bank's Migration and Remittances Factbook 2011, the stock of immigrants in Malaysia is estimated at 2.4 million as at 2010 and the top source countries include Indonesia, Philippines, China, Bangladesh, India, Singapore, Thailand, Japan, Myanmar, and Pakistan. Generally, Malaysia is the major destination country for Indonesian migrants because of its geographical, cultural, and religous proximity to Indonesia.

The objective of this study is to investigate remittance behaviour among Indonesian migrants including the decision to remit and use of informal methods of transferring remittance. The data used was obtained from the Study of Indonesian Migrant Workers in Tawau, Sabah conducted by the National Population and Family Development Board Malaysia in 2010. Three different sets of questionnaire-based survey were conducted on both migrants and non-migrants, namely 896 Indonesian migrant workers, 37 employers who hired the Indonesian migrant workers, and 787 locals in Sabah. Both descriptive and multivariate analyses have been applied in order to study the remittance behaviour of the migrants. At the initial stage, the descriptive analysis explained the percentage of migrants who send remittance and migrants who use informal channels according to their characteristics. Then, logistic regression analysis was performed to investigate the factors that influence migrants' decision to send remittance and the use of informal methods of transferring remittance.

The results of this study showed that age, monthly income, number of children residing in Indonesia, having own house in Indonesia and sending goods to Indonesia are the main factors contributing to the migrants' decision to remit. It was found that the likelihood to remit among migrants increased with age, income and number of children residing in Indonesia. Those who own house in their origin country and sending goods to the country are more likely to remit. In the analysis of methods of transferring remittance, it was found that birth place, number of children residing in Indonesia and the total amount of money remitted have significant relationship with the use of informal channels. The likelihood of using informal channels is higher among migrants from Sulawesi as compared to the other parts of Indonesia. As the number of children residing in Indonesia and amount of money remitted increased, the likelihood of using informal channels had decreased.

P0506

International Migration of Women and Land Ownership in Villages of West Java, Indonesia

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In the last two decades many Indonesian village women work as contract worker in other countries. The circumstances that drive this activity are less employment opportunity in the village, landlessness, poverty and the attraction of relatively high paid employment opportunity with minimum qualification requirement abroad. Land ownership is an important social status indicator for villagers, and to acquire a piece of land at home is the objective of migration. Aim of this research is to investigate the utilization of remittance sent home by migrant women to acquire land. This research was conducted in two villages in West Java. These villages are among villages in West Java as major sending areas of migrant women to Middle Eastern countries. The respondents are return women migrants who had been worked as household maid overseas for at least for years. This research applied quantitative and qualitative approaches in data collection technique. A survey had been taken place to collect general information on migration process and utilization of remittance, while several group discussion were conducted to get insights and personal opinion on women international migration phenomenon in the research villages.

Research result shows that the majority of migrant women were able to acquire only a small piece of dry land and or rice field. The land piece was bought after they worked overseas for years. The size of land piece they bought is from 77m^2 to 300m^2 for dry-land and from 120m^2 to 2.3 hectare for rice field. Investment on land has become an option for these women because: (1) they came from the lowest social stratum family in the village; (2) they were landless farmers; (3) land ownership is an important social status symbol in the village in life or death; and (4) land acquisition is a saving form for future survival when they stop working overseas. People in these villages will receive different forms of burial ceremony on their death according to their land ownership. The migrant women are well aware of the risks to be faced on their endeavor, such as personal document fraudulent, economic exploitation, sexual harassment, physical violence or dead, however they insist to go abroad for better family standing economically and socially

Keyword: international women migrant, land ownership, village economy.

P0507

The Impact of Indonesian Migrants from the Locals' Perception: A Study in Sabah, Malaysia.

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Being a developed country, Malaysia has been receiving a large number of labour migrants from other neighboring countries. Statistics show that the total number of non-Malaysians in 2010 is 2.3 million compared to 1.3 million in the year 2000. It is over 8 percent of the total population in Malaysia and comprises mostly of Indonesian migrants. This phenomena has a great impact on Malaysia and its people.

The objective of this study is to determine the impact of Indonesian migrants from the locals' perception and also to determine if gender, ethnicity, religion, marital status, educational level, job industry and monthly income make a difference in their perception. The data used for this study were obtained from the Study on Indonesian Migrants in Tawau, Sabah conducted by the National Population and Family Development Board (NPFDB) Malaysia in 2010. The survey managed to obtain information from 787 locals in Tawau. The dependent variable is the overall perception of the locals on the impact of the Indonesian migrants while the independent variables are gender, ethnicity, religion, marital status, educational level, job industry and monthly income. Independent t-test and analysis of variances (ANOVA) were applied to the data set.

As a result, this study indicates that the locals in Tawau feel that the presence of the Indonesian migrants does have an effect on them. The mean score obtained was 95.053 out of a total of 135. The results of ANOVA showed that ethnicity ($F = 6.950$, $df = 7$), marital status ($F = 12.320$, $df = 3$), education level ($F = 4.058$, $df = 7$), job industry ($F = 27.374$, $df = 3$), and monthly income ($F = 15.201$, $df = 6$) contributed to the differences in the locals' perception on the impact of Indonesian migrants. Only gender and religion does not affect their perception. Thus, the entrance of Indonesian workers needs to be monitored as their presence are affecting the locals.

P0509

Is Acculturation Always Adverse to Asian Immigrant Health in the U.S.?

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In explaining the health trajectory of immigrant populations in the U.S., the conventional acculturation theory (uni-dimensional model) has been prevailing. According to this theory, immigrants who are selectively healthy at migration tend to adopt health-deteriorating U.S. culture and behaviours, as their acculturation proceeds. Although there have been arguments that acculturation process may be segmented by their social characteristics (e.g. race, nationality, socioeconomic status and time/age at migration), such perspective has rarely been applied in understanding the health of immigrant populations. Therefore, this study examines if the health trajectory of Asian immigrant populations is different by the segments of acculturation process. The hypotheses are (1) Asian immigrants whose SES is low at migration show a deteriorating health trajectory as they are more acculturated to the U.S. society, and (2) Asian immigrants whose SES is high at migration show a progressive, or at least non-deteriorating, health trajectory as they are more acculturated.

Method

- 2005 and 2007 California Health Interview Surveys (CHISs) were used.
- Three datasets - aggregated Asian immigrants (excluding US borns) and national subgroups categorised by educational attainment (high school or less, college or more) - were analysed.
- Assimilation was measured by one variable - proportion of life spent in the US.
- As outcomes of interest, we focused on two domains - Health outcomes (general health status, psychological distress and disability status due to physical/mental/emotional condition) and health behaviours (regular activity and current smoking status).
- Health outcomes and health behaviours were evaluated adjusting for sex, age, marital status, household income and self-reported English proficiency.

Results
Please refer to the attached file.

Even though the patterns of some health outcomes and behaviours we examined are concordant to the conventional acculturation theory, the results reported may be strong evidence of segmented assimilation that low SES immigrants experience a deteriorating health trajectory while high SES immigrants experience a progressive health trajectory as they are more acculturated to the U.S. society.

P0511

New Approach of International Migration Measurement (Base on Population Census Datasets)

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This proposal will analyze on international migration in Indonesia by using the results of population census datasets. This is useful to fill the gaps of demographic analysis related to how large the international migration that occurs in a country. The number of incoming migrants (migrant-in) from abroad can be obtained from the results of population census, but not for the number of outgoing migrants (migrant-out) officially. Thus, it is important to calculate the number of out-migration primarily for purpose of population number at certain time, so specifically it can be obtained through population projections. In the common population projections in Indonesia, the international migration is considered as zero, due to the insignificant number. This determination has led to the increasing number of population which follows the growth rate that is only affected by fertility and mortality, the influence of international migration is considered too small (can be assumed constant). Current rapid development on transportation technology makes people much easier having mobility not only intra-country (domestic) but also inter-countries. Those reasons and conditions have supported the international migration that has increased remarkably. Therefore, the number of international migration should be included in the projection population measurement.

As mentioned above, the forecasts of international migration is one of the most difficulties to perform. Only those countries that are considered by migrants to be of greatest attraction may have the possibility of forecasting migration with certain accuracy, by offering only a specific number of immigrant visas. Even then, the issue of undocumented migrants remains unresolved. Indirect estimation techniques were conducted to obtain international migration in Indonesia. The collection of international migration rates in the previous years before the census from multiple data sources of immigration or population registration is required to establish trends. Then, the estimation of international migration can be obtained both for male and female as well as by age group by applying the life table. Determination of level in life table refers the death indicators derived from census variables that have been processed.

The result of assessment will support to the population projection for the countries and give knowledge to do something for data user and producer, especially for the government level at any departments which involved within and have interest on those matters

P0513

Health Transition of International Migrants: A Comparative Study of Indian and Chinese Immigrants in the U.S.

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Present paper has made an attempt to study the transition in health of Indian and Chinese legal immigrants in the U.S., in a comparative perspective. A health model has been formulated based on two related insights: 1) if migration is stressful, then the appropriate time for assessing health selectivity is at the time of the migration decision rather than at the time of the actual migration, and 2) assessment of health change subsequent to immigration should take into account heterogeneity in the sources of health change and their timing. The model distinguishes between the permanent and transitory components of health and identifies three distinct sources of change in the transitory component: visa stress, migration stress, and U.S. exposure. Though not all the data required for a thorough empirical assessment are available, several key components of health change have been estimated. This paper uses data from the New Immigrant Survey, carried out in the United States. This is a panel study of the new legal immigrants in the United States, and the information for the present paper has been drawn from the base-line round of its first full cohort of the fiscal year 2003. Results indicate towards a wide variability in the distribution of immigrants' health for the different visa categories. Employment-based immigrants appear to be among the most positively selected for health. Chinese immigrants are more likely than Indian immigrants to report experiencing sadness or depression because of the visa process and the pattern of effects appears to differ across the sexes.

P0514

Statistical Analysis on Irregularization Pattern of Immigrants in Korea

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This project aims to examine the characteristics of irregular migrants and current irregularization pattern in Korea. The technical management of the project such as data collecting from MOJ and data set establishing will be implemented by DSLAB as the main implementing partner. The project will conduct statistical analysis using foreigner registration data of MOJ. The analysis results will provide deeper understandings on irregularization pattern and characteristics of irregular migrants particularly focusing on different effects of gabs of economic development between Korea and sending countries by migrant characteristics. In addition, this project will show a best practice on how to utilize national migration data for policy development and migration research.

P0601

Living and Health Conditions in Urban Slums: The Complexity of Rural to Urban Migration

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This study was conducted to asses living conditions and health status in urban slums of six selected cities of Pakistan namely Sialkot, Mingora, Mansehra, Sukkur, Gilgit and Muzafarabad with the Financial Support of UNFPA, Islamabad and technical support of UN habitat, Islamabad. Those cities were selected where UN habitat has launched program of up gradation of low income areas. A total sample of 2420 ever married women of reproductive ages (14-49) was selected from low income settlements of abovementioned cities. Probability techniques were employed to draw above mentioned sample.

Major findings with regard to health care services suggest that a significant majority in Mansehra (77.8%) and, Muzafarabad (88.9%) went to government hospitals. In Mingora and Sialkot more than half of the respondents availed health facility from Hakim/Homeopathic.

Findings on reproductive behavior suggested amongst the respondents (70.4%) did not use anything to delay pregnancy. Lady Health Visitors and Lady Health Workers came up as a significant source of information of family planning except in Mingora. The government hospitals were the most common source of getting family planning service.

On the housing characteristics it was found that basic utilities were present in the majority of households, but electronic appliances were not. Data also indicated that majority (84.26%) of the respondents have open-space system for disposing solid waste. With regard to threats related to housing majority of the respondents have threats of flooding, land sliding and like.

On the questions related to household expenditures, Mansehra stood at the lowest ebb. It spent less than Rs.5000/month on food items. Over all data exhibited that Muzafarabad and Gilgit had relatively better spending on food items than other regions. In Mingora and Sialkot more than half of the respondents have spent Rs 1,001 to 3,000/month on utility charges. With regard to spending on children's education Gilgit superseded all other sampled cities as majority (62.1%) of respondents in this city spent more than Rs 1,000/month. In Mingora situation seemed to be depressing as more than half (53.4%) of the respondents were those whom this question was not applicable. Data indicated that a large number of respondents (86.4%) did not avail support of Benazir income program except Sukkur having a per centage of almost one fourth. A Significant majority of respondents (79.2%) did not avail micro-credit facility.

With regard to access to information data of all urban slums indicated that newspaper reading was not a common practice of respondents. Overall the data suggested that majority of respondents as expected had low level of income that indicated poor living standards.

P0602

Does Expenditure Patterns Shape Differently for Household With Migrants? Evidence from Indonesia Family Life Survey

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Migration reshapes rural economies in ways that may go beyond the contribution of migrant remittances to household income. Consumption and investment expenditures by migrant-sending households may transmit some of the impacts of migration to others inside and outside the rural economy, and they also may shape the potential effects of migration within the source household. This study inquire into the impact of rural-urban migration on expenditure patterns. The question of interest is does household with migrants have different expenditures allocation than households without migrant?

Using two waves data (2000 and 2007) from the Indonesian Family Life Survey (IFLS), this study argue and offer empirical evidence that rural-to-urban migration reshapes rural household expenditure patterns in direct and indirect ways. This study apply an instrumental variable estimation method, using historical migration networks as instruments for migration and followed by household demand analysis to model rural households' expenditure pattern on a group of related items. The system of expenditure equations estimate jointly for the full household sample using seemingly unrelated regression (SUR) estimation to exploit the information contained in the cross-equation error correlation.

Three key findings emerge. First, using an instrumental variables approach to control for selection and endogeneity, it finds that migration have a significant statistical effect on reshaping Indonesian rural households' expenditure on food and non-food, particularly expenditure on education. Second, households with migrants spent more at the margin on consumption food – meat and vegetables – compared with what they would have spent on this good without migrants. Third, households with migrants spent less at the margin on one some investment good – housing – compared with what they would have spent on this good without migrants. The results are robust with respect to the estimation method applied, and illustrate that migration might enhances human capital accumulation with positive external effect for the rest of the economy as well.

Understanding the impact of migration on expenditures pattern is critical to assessing the role of migration as households' potential source for survival and/or investment. From rural development perspectives, rural-urban labor migration may be beneficial to the households through migrants' remittance which may be used to improve their living standards, invest in agricultural activities (e.g. to buy or acquire more land), hire more labor, or invest in health and children's education.

P0604

Reluctance to Move- The Case of the Motu Koitabu of Port Moresby, Papua New Guinea

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This paper examines the demographic behaviour of the *Motu Koitabu* people of Hanuabada, a traditional village in Port Moresby, the capital of Papua New Guinea (PNG) and aims to explain the reasons behind the persistence of their traditional behaviour in spite of their long exposure to modern culture. The main argument of the paper is that the demographic behaviour of the *Motu Koitabu* are primarily determined by interactions between family and kin, and are associated with old age support, continuation of lineages, and strength and security of clan groups. This ethnic group is the traditional owner of the land where Port Moresby is built and they are not likely to leave this site and change their social and cultural arrangements. But the economic hardships of urban living are putting pressure on them to make adjustments. From a rational viewpoint, the social and economic changes reshaping Hanuabada are sufficient reasons to leave and settle elsewhere, yet most people want to remain there. The continuation of the 'family house' strengthens the family unit and increases clan support, making people continuing to live in their cultural safety net. The study is based on quantitative and qualitative data collected in Hanuabada. *Motu Koitabu* women are increasingly completing primary education and many are involved in informal economic activities to earn a living. Their socio-economic and demographic parameters reflect characteristics typical of PNG women. Most women are married, and married early. They prefer to have more children than their total fertility rate of 3.3 indicates. Most women are still required to obtain permission from their husbands to use family planning and those with high fertility have never used any. Education is not a significant determinant of fertility, but women with less income have high fertility. Child survival increases with increasing income and the highest child losses are experienced by older women, who find modernization confronting and seeking health services a challenge. Given this demographic outlook, the supremacy of the cultural element over other factors in making decisions to remain in the safety nets of the *Motu Koitabu* society is well placed. Maintaining 'family house' activities helps to keep members of the family and clan groups together. The *Motu Koitabu* believe that Hanuabada is their birthplace and rightful home where they feel safe. Moves to alternative locations, if considered should be made in family groups to clan-oriented lands situated nearby which would continue to foster the cultural way of life. A small minority, though do not want to remain in Hanuabada, mainly because of the negative aspects cultural obligations such as contributing to bride price payment and death related feast expenses, which put pressure on individual income.

P0605

The Impact Factors of China's Floating Population Housing Type

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Since Reform and Opening, China's Floating Population has gradually attracted the scholars' attention, and now the focus is the housing conditions of Floating Population. This is because the development of Floating Population and the Government has realized that Floating Population play an important role in China's economic development.

As a kind of basic personal necessities, housing is to protect the fundamental rights of people. China's Floating Population dynamic monitoring data in the first half of 2010 shows that renting is the main way, which accounted for 75.3%, followed by employers providing free accommodation, accounting for 16.3%, and people who buy their own houses only accounted for 6.8%.These figures show that the majority of China's Floating Population is still not achieve family migration and settlement. In this paper, we use the data from China's Floating Population dynamic monitoring survey (in the first half of 2010).This survey was organized and implemented by the National Population and Family Planning Commission. It randomly selected a number of streets and urban communities in 106 cities, 31 provinces (autonomous regions and municipalities).The sample size is 12.8 million, and the effective sample is 10.84 million households (no more than one person in one family). Through monitoring Floating Population's demographic information, employment, housing, reproductive health services and other public services, as well as social participation and social integration, we can grasp the structure, movements and demand of Floating Population timely and accurately, and the information can be helpful to promote equalization of basic public services.

This study focuses on the impact factors of the type of housing in Floating Population. In order to explore the potential law, the factors are classified into three types, including Floating Population's characteristics, family members to follow and willingness to stay.

From the study we can found three conclusions. The first one is spouses and children of Floating Population can play a positive role in promoting Floating Population's housing conditions. The second one is due to the lack of the residence certificate of the city where they migrate to. Floating Population cannot enter into the city's housing system, and restricts their choice of the type of residence. The third is the willingness to stay has a significant impact on their choice of housing type.

P0606

Examining the Relationship between Migration and Living Environment of Child Health in Urban India

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The matter of concern relates to the fact that more than one third of current 3 billion urban dwellers live in slums or places characterized by poor structural housing conditions, deficient access to safe drinking water and sanitation, and severe overcrowding. More importantly, all these myriad factors have direct bearing upon the physical and psychological well-being of the urban population. Due to inadequate provision of water and sanitation facilities, more than half of population in developing countries suffers from diarrheal and warm infections. Owing to higher level of overcrowding in urban areas, poor urban dwellers become more vulnerable to contracting various communicable diseases such as tuberculosis, acute respiratory infections and meningitis. The process of urbanization is rapidly unfolding, associated with enormous challenges of providing decent housing facilities, safe drinking-water and hygienic sanitation to urban dwellers in India. However, previous studies in the context of developing countries have examined the health status and health seeking behavior among urban population. However, there is a dearth of study that specifically examine association between migration and living condition i.e. availability of basic housing amenities like quality of housing, safe drinking water and sanitation on the health and nutritional status of children living in urban areas in developing countries in general and Indian context in particular. Therefore, the main objective of the present study is to examine the relationship between migration and the availability of housing amenities and health and nutritional status of Indian children in urban India.

This study used cross-sectional data from third round of National Family Health Survey (NFHS) conducted in 2005-06. The analysis is based on children below five years of age. The main outcome variables related to health status of children are-diarrhea, and acute respiratory infections. Anthropometric measures of weight-for-age (underweight), height-for-age (stunting) and weight-for-height (wasting) are used to assess the nutritional status of children.

Cross-tabulations, Chi-square test and logistic regressions models have been used to fulfill objectives of the study.

Result indicates significant differentials in migration status, child health (ARI & diarrhea) and nutritional status (stunting, wasting and underweight) according to availability of housing amenities in urban India. However, these crude variations become insignificant once controlled for critical socioeconomic and demographic confounders in the logistic regression analysis. Mother education and household economic status remains critical factors governing child health and nutrition in urban India.

P0607

Migration and Child Immunization in Urban India: A Contextual Analysis at Individual and Regional Level

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Migration has been implicated as one of the behavioural processes influencing low immunization uptake. Population migration is a choice process that is influenced by socio-economic, demographic and cultural factors. Children with high morbidity and mortality are the most vulnerable group among migrants and need special care. Vaccine-preventable diseases are responsible for severe rates of morbidity and mortality. Despite the availability of appropriate vaccines for routine use on infants, vaccine-preventable diseases are highly endemic. Widespread disparities in the coverage of immunization programmes persist, between and within rural and urban areas, and regions in India.
This study assessed the individual- and regional level explanatory factors associated with child immunization differentials between migrant and non-migrant groups in urban India.

The proportion of children that received each of the eight vaccines in the routine immunization schedule in India is estimated. Multivariate regression analysis has been performed using a nationally representative sample of 12-23 months of children from 15-49 years of mothers. Odds ratios with 95% confidence intervals have used to express measures of association between the characteristics. Variance partition coefficients and Wald statistic i.e. the ratio of the estimate to its standard error were used to express measures of variation.

Individual- and regional contexts are strongly associated with the likelihood of receiving full immunization among migrant groups. The likelihood of full immunization was higher for children of urban to urban migrant mothers compared to children of urban non migrant mothers. Findings provide support for the traditional migration perspectives, and show that individual-level characteristics, such as, migrant disruption (migration itself), selectivity (demographic and socio-economic characteristics), and adaptation (health care utilization), as well as regional-level characteristics are important in explaining the differentials in full immunization among the children.

Migration is an important determinant of child immunization uptake. This study stresses the need for regional-level efforts at increasing female education, measures aimed at alleviating poverty for residents in urban areas, and improving the equitable distribution of maternal and child health services.

P0608

Regional Pattern, Distribution and Growth of Towns and Cities in North-Eastern States of India

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An increasing level of urbanisation is an important index of all socio-economic development. A difference in the level of growth of urbanisation is seen among various states and union territories of India. This can also be seen in the seven north-eastern states which are economically backward areas and geographically remote areas.

The main thrust of the work is to analyse the level and trend of urbanisation in the region vis-à-vis the rest of India over time and to identify the regional pattern, distribution and growth of towns and cities in different size classes in the north-east. For the study most of the data has been taken from Census of India, mainly for population related data.

Findings reveal that in the ancient time this region was very prosperous but due to inefficient management it lost its prosperity. The number of towns increased rapidly in the post independence period due to administrative factors, definitional change of the urban areas by the census, increased level of migration etc. The total urban area increased manifold in the recent past. In demographic processes the contribution of natural increase is not very significant. Migration on the other hand has played a vital role in the growth of urban population. Intra-state migration is high than inter-state and international migration. North East India covers more than 90% of international border of India. Consequently the region experience large-scale international migration.

P0609

Determinates of Male Migrants in India, Evidence from National Sample Survey Origination

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Migration is an integral part of human being. It is an unavoidable continuous process for human civilization as well as development. The pattern and source of migration is almost analogous all over the world. But, its applicability and effects are different from developed world to developing world. Nevertheless, the recent speed of globalization has given new dimension to it. Migration both internal and international has great importance for a country. Internal migration is important almost all over the place and even if, in some countries, it is far greater than international migration. Internal migration has resumed greater importance as a component of people's livelihood strategies and in shaping the national economy. Internal migration involves men, women and children, and includes rural to rural, urban to rural, urban to urban and rural to urban flows. The trends of internal migration are increasing day by day. Migration has an influence on population distribution as well as population redistribution within a country. So, migration changes the distribution of population both at the place of origin and the place of destination, which affects the economic, social, demographic condition of a country positively or negatively. Migration enhances the process of urbanization as well as industrialization. Actually, it is no doubt linked to the process of overall economic development and social condition of a country.

To study the background characteristics of migrants and also to examine the significance of some selected socio-economic and demographic variables among having good status and not good status before migration for male migrants and second identify the determinants of socio-economic and demographic characteristics for engaged in economic activities by applying logistic regression analysis.

This study is based on the 64th round survey on *Employment & Unemployment and Migration Particulars* (Schedule 10.2) conducted during July, 2007 to June, 2008. The survey covered a sample of 1, 25,578 households (79,091 in rural areas and 46,487 in urban areas) and a sample 5, 72,254 persons (3, 74,294 in rural areas and 1, 97,960 in urban areas).

Chi-square test, logistic regression analysis, and F-test are employed to fulfil the aforementioned objectives. It is identified that age, educational qualification, occupation (before migration), cause of migration significantly effect on status of male migrants.

It is identified socioeconomic and demographic variables that age, educational qualification, occupation (before migration), type of migration (temporary and permanent) etc. significantly effect on engaged in economic activities

P0610

Evaluation of Social Adaption Level of New Generation Migrant Workers in China

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The new generation of migrant workers, who is currently in the key stage of adapting to the immigrant area, has become a social group that cannot be ignored in China's cities. This paper aims at finding out the social adaption situation of the new generation of migrant workers in China's urbanization progress, evaluating the current adaption level, and analyzing the main factors that influence their social adaption.

The data is from the New Generation of Migrant Workers Research (2011) conduced in January 2011. The research studies 1201 migrant workers from 24 provinces or cities in China by questionnaire and in-depth interview.

To establish the social adaption level, the author set the index of social adaption with the new generation migrant workers. The index system includes three classes, which is about 5 points: assimilation ability, identity recognition, social acceptation, fairness of adaption, and home-leaving.
According to the research, Chinese new generation migrant workers have reached 51% overall. In the aspect of self-evaluation, with the situation of leaving-hometown and the fairness of adaption is higher, while the assimilation ability and identity cognition level is lower, self-cognition element of social acceptation is medium. Select personal characteristics, family characteristics, as well as social capital & human capital as the three different variables to explore the influences according to Logistic Regression.

In the aspect of personal subjective assessment, with the situation of leaving their flow-out places and the self-awareness, the fairness extent of the social adaption is higher, while the personal integrating capability and the identify recognition level is lower, the social admission level of the self-awareness is medium. This disagrees with the previous research results, which considered the new generation migrant workers had a strong feeling of deprivation. The present research demonstrates that the new generation migrant workers do not think subjectively of a high level of exclusion from the city, while the affirmation level of personal identity and personal integrating capability into the city is low, which indicates that there is still an enormous room for the growth of the social inclusion level of the new generation migrant workers.

Family (the relative capital of family members' mobility and flowing into the city) is another important factor influencing the social inclusion of the new generation migrant workers, which disagree with the hypotheses of the research. In this article, we are apt to explain it from the point of view of social support. Most of the migrant workers are at a status of "semi-citizenization", and even at a status of "virtual- citizenization". Nevertheless, the working experience, which is related to the human capital of the floating population, does not significantly affect the social inclusion level of the new generation migrant workers.

P0611

Population Magnetism in Metropolitan Areas and Policy Responses in Selected Countries of ESCAP during 1950-2010

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In The past Five decades, ESCAP's metropolitan Areas have involved "Population Magnetism". Population overconcentration and imbalanced density is one of the obvious characteristics of the population settelment system in many Asian developing countries. Experts call this mode as the urban primacy.The urban primacy can be defined as the central place in an urban or city network that has acquired or obtained a great level of dominance.Tehran's population 7 times, Jakarta 6 times, Bangkok nearly 5 times, Beijing nearly 7 times, Tokyo over 3 times, Manillai 7 times have become in the past 50 years. Net migration rates in these metropolitan areas has been higher than in other areas of country. over concentration and over density in large cities specially in capitals has become an important issue for many governments. In reaction to high population growth in metropolitan Areas, policy-makings on population growth control in large cities have been begun since 1970s.These policies are divided to: regional development plan, reverse and planning migration, Laws for restriction of population movements, economical and political decentralization. Basically, Centralization of population during demographic transition and modernization is inevitable but it's seems that the most important factor on more balancing distribution of population is regional equilibrium of political and economic power at national environments. Experiences of China, Vietnam and Indonesia shows that if regional inequalities are not removed basically, maybe the strict controlling law can prevent huge population movements toward large cities for a short time, but it will be followed by a critical and compensative reflection in the longer time.By comparison of the population growths and type of policies, we can claim that those countries which implemented political and economical decentralization policies, were more successful.

P0612

Do Providing Care for Grandchildren Reduce the Life Satisfaction of Older People on the Background of Out-Migration in Rural China?

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The migration of working-age adults from rural to urban China, which has influenced the rural families greatly and challenged the traditional pattern of pension modes and intergenerational support, it impacted the physiological and psychological of the elderly persons. This investigation examined whether provide care for grandchildren reduce the life satisfaction of older people and providing grandchild care to sons and daughters how to affect the life satisfaction of older people.

Data from a sample survey and follow-up surveys, "Well-being of the elderly in Anhui Province", conducted in 2001, 2003, and 2006 respectively, by the Institute for Population and Development Studies of Xi'an Jiaotong University in Chaohu city, Anhui Province, survey adopted stratified multi-stage sampling method, data were collected from a sample of adults age 60 and over living in rural townships within Chaohu. We used random effects logistic model in order to estimate the effects of providing care for grandchildren on life satisfaction of older parents.

On the background of out-migration, providing care for grandchildren improved the life satisfaction of older people, and grandparents providing grandchild care to sons had better psychological well-being than those providing grandchild care to daughters. Providing care for their grandchildren can promote the emotional exchanges between generations, so improved well-being; and found the elderly and adult children existed "time-money" reciprocal exchange, receiving more financial support from adult children also increased old parents' well-being.

The results show that the elderly enjoyed in the process of taking care of grandchildren, this enhanced the intimacy between grandchildren and elderly, in the process also affirmed the value of the elderly persons and fulfilled their psychological needs, so increase their life satisfaction. Grandparents providing grandchild care to sons had better life satisfaction, which suggested that Chinese traditional "son preference" norm had an effect on psychological well-being of the grandparents. On the other hand, adult children to give more financial support to the elderly as the exchange of taking care for grandchildren, it also coincide the corporate group mode which the purpose of exchange is to enhance returns, also improve the life satisfaction of older people. Finally, this study suggests that to establishment of rural child care institutions in rural townships in order to reduce the actual burden and psychological burden of elderly, as well as through increased investment in rural communication facilities, etc. to create communication conditions for adult children and staying elderly, ultimately enhance the welfare of rural elderly.

P0613

Internal Migration in Vietnam: Findings from the Past Three Censuses

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Analysis of the past three Census sample survey data of Vietnam (i.e. 1989, 1999, and 2009 Census) clearly showed an increasing trend in migration in both absolute and relative terms. Clear evidence was found for the contribution of migration to population in urban areas, especially the larger urban areas. The results suggest that migration, especially the rapidly growing rural-to-urban migration, deserves greater attention. Migration related policies should take into consideration the great diversity and differences in migration and migrants. Census data shed light on characteristics of 'longer term' migrants but overlook more temporary migrants, the population group that should receive greater attention in further research studies. The relationship between migration and development is complicated: while migration makes positive contributions to migrants themselves, and to development of the place of destination, it also contributes to increasing socio-economic disparities between the place of origin and place of destination, between rural and urban areas, and among regions; rural areas and the main migrant sending regions including the Central Coast and Mekong Delta regions face disadvantages while urban areas, especially large cities and provinces and major migrant receiving regions, such as the Southeast, have benefitted from the young migrants who tend to have better social capital. Regional and national development plans and policies need to consider measures to ensure the optimal contribution of migration towards development. Findings from the Census also reveal the need for special attention to migrant women and children.

P0614

Impact of Urbanization on Agricultural System: A Study of Regional Imbalances around Big Cities

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India faces the most acute pressure on agricultural land. Today every million hectares of land supports 7.27 million people. Forty three percent of the land is under cultivation, one of the highest in the world, with these few evidences and its relation with rapidly growing urbanization. Over the past fifty years, while India's total population increased by about 3 times, the total area of land under cultivation increased by only 20.27 percent from 118.75 million hectares in 1951 to 142.82 million hectares in 2001while land for non-agricultural uses as housing, industry and others, were increased from 9.36 million hectares to 22.97 million hectares in 1951 to 2001.The impacts of the urbanization especially around the few big cities are undesirable both from point of view of balanced regional development and from the viewpoint on the serious negative impact on agricultural system and neighboring rural economies. The present paper analyses the phenomenon of transformation of agricultural land into urban uses and its adverse impact on agricultural system in and around big cities of Eastern Uttar Pradesh.

P0615

Levels of Urbanization in the World's Countries: Alternative Estimates

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The United Nations Population Division produces estimates of urbanization levels of all the world's countries, updated every two years (the latest being *World Urbanization Prospects: The 2009 Revision*). These are the only detailed set of estimates of the world's urban population, and as such, are widely used. The estimates of urban populations are based on the definitions of urban as adopted in each country. These definitions vary widely across countries causing problems with respect to comparability. The objective in this paper is to construct alternative estimates of urbanization for all countries for 1990 and 2000 which are comparable across countries, to use these estimates to point out definitional problems or outlying countries with interesting urban characteristics.

P0801

Aging Perception and Health Promotion Lifestyle among Iranian Older Adults

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Aging Perceptions relate to health and behavioral outcomes and has substantial importance for older people. This paper attempts to explore how Iranian older adults perceive aging as a stage of human life. The importance aim of this paper lies in its focus on the views of older people themselves and its affect on their health promotion lifestyle.

We use survey as a research method and questionnaire as a tool of data gathering. Data analysis has been done with SPSS program in descriptive and inferential statistics levels. The statistical sample including 400 older adults in Shiraz city (one of the biggest city in Iran) those choose by proportional stratified-sampling method. The theoretical framework of this research is revised Pender health promoting behavior model. Health promotion lifestyle including six dimensions (health responsibility, nutrition, physical activity, personal relationship, spiritual grows, stress management) and aging perception including four subscales (timeline, emotional representation, control, Consequences).
The multivariate results show ageing perception and health promotion lifestyle are different by socio-demographic factors such as gender, education, income, social class and so on. In addition, the findings indicate that aging perception significantly affect health promotion lifestyle directly and indirectly. The results of this study can contribute to research and social policy for promotion of health lifestyle.

Key words: health promotion lifestyle, aging perception, older adults, Iran.

P0803

The Aging Population in Tajikistan: Demographic and Economic Features

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It is well known saying: "demography - a mirror of the economy," but in practice this means that the demographic development, ultimately determined by socio-economic development. In our opinion, the main factor in demographic changes over the past more than 20 year period in Tajikistan is a change in lifestyle of the population.

In interaction of socio-economic and demographic developments have appeared, previously unknown, new shades of meaningful lifestyle. And above all - an adaptation to new realities of people's lives that are radically different from anything that was attended by more than seven decades, changing forms of economic relations, the decentralization of economic instruments in small arenas of economic space, increased dependence on family demographic behavior of economic conditions , the trend of aging population - all these innovations that have emerged along with the independence of our country and the emergence of new, market-based economic relations. Socio-economic and demographic ligament becomes relevant for another reason. Over the last decade for the first time in the history of Soviet and post-Soviet Tajikistan's economy has undergone in the first, shock and vibration control system changes, and secondly, change the value orientations of society from collective to open more private - individual. And this situation can not but affects the condition of society in the future.

Change of generation associated with the time of human life, that is the age of man. In this regard, there is a new concept - the "aging society". The aging of the population now has a revolutionary character. There is a rapid increase in population of advanced age. Many prominent scientists and politicians focusing its attention on this issue.

The problems of old age is largely due to the fact, as our society tries to understand and solve the problems facing the new challenges it - their own reproduction and population development. The process of generational change - leaving one parish and others - concerns the foundations of our existence: birth, life, aging, and death. Shifts in the age structure of society, changing intergenerational relationships affect the attitude of every person to life, death and the development of society as a whole.

Demographic processes are smoother swing, and thus significantly changed the demographic behavior of the population. Population growth as the economy has some fluctuations, but nevertheless, the population is increasing. GDP in 2010 compared to 1998 increased by more than one-third, while the population increased by almost 15%. Official and unofficial projections indicate that if demographic trends do not change very substantially (the average birth rate and high economic emigration), which have the image of the "open scissors", the gap between the two rates will inevitably rise.

P0804

Foreign Domestic Workers Lessen the Negative Impact of Older Adult Impairments on Their Informal Caregivers: Results from Singapore Survey on Informal Caregiving

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In Singapore, norms and expectations are to care for the elderly at home. A rapidly aging population, shrinking family size and high male and female workforce participation makes caring for the elderly at home challenging for their family members (informal caregivers). Live-in full-time foreign domestic workers (FDWs) are employed by many families to help care for elderly family members. Pearlin's stress process model hypothesizes an increase in severity of impairments in the older adult to negatively impact the informal caregiver, however the presence of instrumental support moderates this negative impact. Recent studies suggest negative impact in multiple domains (e.g. health, schedule, finances), but also positive impact (on self esteem), of care provision for informal caregivers.

To assess the moderating effect of instrumental support by a FDW on the impact of four types of impairments: in 1) physical function, 2) memory,3) behaviour and4) mood in older adults on their primary informal caregivers.

The Singapore Survey on Informal Caregiving (SSIC) 2010-11 is a national survey including 1190 Singaporeans aged >75 years receiving human assistance for activity of daily living (ADL) limitations (‘care recipient' (CR)), and their primary informal caregiver (CG).. Scores for severity of impairment in physical function (ADLs and instrumental ADLs (IADLs)), memory, behaviour and mood of the CRs were calculated. A modified version of the Caregiver Reaction Assessment (CRA) scale assessed the impact of caregiving among caregivers in four domains: 1) schedule and health (SH), 2) finances (FIN), 3) lack of family support (LFS), and 4) self esteem (SE). Instrumental support by a FDW was defined as assistance from a FDW in ADLs/IADLs. Linear regression models, one for each CRA domain, adjusting for CR and CG demographics, with (to assess effect modification) interaction terms of the four impairment severity scores with FDW support, were developed. Significant ($p<0.05$) interaction terms were retained.

FDW support was reported for 50.2% of the CRs. FDW support reduced, or even reversed, the negative impact of physical impairment on SH ($p=0.05$), of memory impairment on SH ($p<0.0001$) and LFS ($p=0.03$), and of behaviour problems on LFS ($p =0.05$) and SE ($p=0.008$). While a positive impact of negative mood on SE was observed in the absence of FDW support, there was no such association in the presence of FDW support ($p=0.004$).

Provision of instrumental support by a FDW appears to be beneficial for informal caregivers caring for the elderly, the benefit increasing with an increase in severity of older adult impairments. With a rising proportion of elderly in Singapore, the role of FDWs in elder care should be carefully considered by the families of elderly with impairments and by policy makers.

P0805

Living Arrangements and Psychological Well being of ElderlyWidows: Insights from Rural India

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The traditional living arrangements in India wherein elderly live with their children and extended families were always appreciated and these arrangements were considered as a social safety net in the absence of any social security schemes. Living arrangements of elderly makes a significant difference to a variety of factors, and directly or indirectly contribute to the quality of life of aged population. Due to the adverse effects of modernization, westernization and urbanization in Indian society, the traditional bonds existed within the extended family are now gradually breaking. The elderly have been the worst sufferers of the changing values and attitudes in the family system. In Indian context, it is not only the number of children, but their gender and marital status that determine the co-residence pattern of aged. Widows are the most vulnerable segment of the elderly population in rural India. The widowed status places the women in a disadvantaged position particularly in their old age and majority of them live as dependents for many years. Based on a sample survey of 300 elderly widows from the selected villages of North Indian state of Jharkhand, this paper analyzes the relationships between living arrangements and psychological health of elderly. Geriatric Depression Scale (GDS) was employed to measure the level of depression. The study found that thirteen percent of the elderly widows are living alone or 'left behind'. Among the elderly widows who are currently living alone, 67 percent prefer to live alone and little less than one-fourth want to live with their sons. Majority complained of "loneliness" and "lack of care" from the family indicating the extent of frustration among them. Slightly less than half (45 percent) of the elderly widows reported that they have changed or forced to change their place of residence after the death of their husbands. According to our analysis, more than one-third of the respondents have mild depression. Thirty six percent of those who are living alone are severely depressed. It was found that the presence of family members provide emotional as well as instrumental support during old age. The analysis further indicated that elderly widows suffer due to lack of care and support, insecurity, disability and neglect by immediate family members. Elderly widows are doubly affected due to the combined effects of old age and widowhood. While formulating policies and programmes, it is important to consider the widows as a vulnerable segment of elderly population. There is a need to strengthen the family support system for the care and protection of elderly, especially for widows. Living arrangements, economic benefits and social support needed to be provided to facilitate these deprived women to live with peace and dignity in the last phase of their life.

P0807

The Socio-psychological and Demographic Correlates of Nutrition and Food Insecurity among Elderly of Shabestar County in the Northwest of Iran

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Due to individual, social, and cultural characteristics of elderly people, they are among most vulnerable segments of the society in terms of food and nutrition issues including food insecurity. Review of the literature demonstrates that aging is associated with changes in personal and psychological characteristics, and social status of the individual within the family, and the society in large. These changes potentially have significant effects on the individual's access to proper nutrition, sufficient quantity, and appropriate quality of food. Elder's diminishing health, marital status, employment status, position in the family, living arrangements and conditions might affect his or her access to quantity and quality of food intake and food resources. Using the standards of CDSE, we investigated the effects of socio-psychological and demographic characteristics such as nutritional knowledge and self-efficacy, and demographic correlates such as age, sex, education, income, employment, living arrangements, and place of residence on the intensity of food insecurity among a sample of 320 elderly people of Shabestar City in the Northwest of Iran. Results of the study indicate 15% sever, 30% mild, and 53% low food insecurity in the overall sample. While gender and place of residence had no significant effect on the severity of food insecurity, level of education, employment status, and living arrangement had a statistically significant effect on the severity of food insecurity. Food insecurity increased by age, and decreased by the level of income. Moreover, nutritional knowledge and self-efficacy were negatively correlated with food insecurity.

Keywords: Food Insecurity, Elderly People, Socio-psychological and demographic correlates.

P0901

Technical Education and Labour Market: An Empirical Study of Engineering Graduates in Delhi

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The study aims to analyze the labor market profile of engineering graduates in Delhi using the data collected from the final year engineering graduates (B.Tech) studying in different types of colleges (central government/state government/private) and departments of study (traditional/IT related courses) in Delhi. The suvey covers 1178 students in the academic year 2008-09. The analysis of the data is done in two stages. First, the labour market profile of the engineering graduates in Delhi is analyzed on six important dimensions like the percentage of students got job offer upon their graduation, waiting period of the engineering graduates (the time gap between the job obtained and the completion of B.Tech degree), type of job the engineering graduates have got (engineering/non-engineering), location of the job (Delhi and its neighbouring states/other states), type of the company the students are joining their job (domestic/foreign/joint-venture) and the annual salary of the graduates by individual characteristics of the students, household characteristics of the students, students' academic background and factors related to current education of the students with the help of frequency tables, cross tables and descriptive statistics. Secondly, logit model is applied to find out the factors (individual characteristics, household characteristics, students' academic background and factors related to current education of the students) determining the employability of an engineering graduates by taking ‘whether the students have got job offer or not upon their graduation' as dependent variable, which is a dummy variable. Further, an attempt is made to find out the determinants of the earning of engineering graduates i.e. the amount of expected annual salary of the students contracted at the time of placement by the employers to engineering graduates in Delhi with the help of Ordinary Least Square (OLS) technique. The analysis in both the levels (descriptive and empirical) have emphasized the role of management of the institutions (government/private) and courses of study (traditional/IT) on the different labour market aspects of engineering education in Delhi.

P0902

Is Industrial Growth Sustainable in Gujarat: The Case of Migrant Labourers in Gujarat (India)

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Gujarat has shown poor record on the Human Development Index during the last two decades. The standing of the State amongst the major states of India has declined from 5th position in 1991 to 6th in 2001 and further to 8th position in 2011. Different studies emerging from various organizations such as Planning Commission, Government of India, United Nation's IHDR, etcetera points out at the poor performance of the State in vital social indicators. On the other hand, the State displays high economic growth in its Gross Domestic Product (GSDP), ranging from 8-11 per cent per annum during the decades 1991-2011. The State has shown poor distribution of wealth, amidst the high per capita income reported during the period. There are studies by Morris (2009), which points out that the high growth is a result of growth in manufacturing sector, which has largely been supported by migrant labour force and workers from other states of India. These migrants are settled in large numbers in cities like Surat, Alang, Vapi, Vadodara, Ahmadabad and Jamnagar contributing to the pool of skilled manpower for the industries. During the last decade, especially after initiation of the Mahatma Gandhi National Rural Employment Guarantee Programme and subsequent investment in infrastructure, the migrants have looking towards their home states. The migrants from states like Maharashtra, Andhra Pradesh, Odisha, Bihar, Uttar Pradesh and West Bengal have seen rise in employment opportunities in their home states. The paper tries to discuss the dependencies of industries on the migrant labours and tries to generate a future scenario given the high industrial investment and labour requirements. Regional scenarios would be presented in relation to industrialization and manpower availability in the State. The paper would be based on data generated by Census of India, Annual Survey of Industries, National Sample Survey Organisation, Bureau of Economics and Statistics (Government of Gujarat) and secondary sources.

P0904

Labour Force Projections for Developed and Emerging Asian Economies by Age, Sex and Highest Level of Educational Attainment

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For a country to truly yield the full benefits of the ‘demographic dividend', it is important that it's disproportionately large labour force is well equipped to harness the advantages of lower dependency ratios. This usually is measured in terms of the skills and education levels of the workforce.
There is a wealth of literature that looks at the past, current and potential future size of the labour force in Asian Countries, and discusses the role changes in the size of the labour force has on economic growth of the region. However, the majority of labour force projections only disaggregate the population by age and sex, with only rare exceptions considering further characteristics, i.e. an urban/rural distinction or educational attainment. Furthermore, the more elaborate the projections are, the shorter is the time-horizon of the projection and the more likely only one country is considered.

We provide labour force projections by age, sex and highest level of educational attainment until 2050 that cover a broad range of Asian countries including People's Republic of China (PRC), Hong Kong, India, Indonesia, Cambodia, the Philippines, Singapore, the Republic of Korea, Thailand and Viet Nam. Hence, it becomes possible to not only compare the development of the labour force in terms of size and age-structure, but also to show changes in the educational distribution within the active population. Since there are significant differences in labour force participation between people with different levels of educational attainment, adding the education dimension provides a much better possibility to assess the future labour potential in a country than merely looking at the educational attainment of the population between 15 and 65.

This is of particular interest since for some countries , i.e. the People's Republic of China, Singapore and the Republic of Korea, the absolute size of the labour force is projected to decline by 2030 (Kim 2010). We hypothesise that the economic impacts of some of this decline might compensated for by investment in other selected Asian countries with a strong skill set and lower dependency ratios.

P0905

Immigrants' Employment Experience in Australia: Recent Evidence from Bangladeshi Immigrants in Adelaide, Australia

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Each year a large proportion of skilled and educated people migrated to Australia from different parts of the world. Bangladeshi people also settled in many parts of Australia under the skilled immigration process with hoping better employment opportunities and future. In general, several studies have identified differential employment experience by the country of origin and immigrants from Asian countries more likely to be unemployed and underemployed. However, it is important to examine the country-specific immigrants' employment experience in Australia compare to their country of origin. This paper illustrates the employment experiences of skilled immigrants in the country of destination compare to the country of origin.

The paper is substantiated based on a comparative cross-sectional study. The analysis is based on data collected in a survey among Bangladeshi skilled migrants living in Adelaide metropolitan area in Australia. The sample consisted of 50% Bangladeshi skilled immigrants and of these 38.5% has participated in this research trough self administered survey questionnaire.

Bangladeshi people migrate to Australia at prime working age range 25-39 years with an average 16.74 years of schooling. Around 52% of the respondents have on-arrival professional education mainly in medicine, engineering, law, computing and marine-trade. Additionally, after migration, 52% of the respondents have obtained further educational qualifications, predominantly certificate/diploma course(s), in Australia to secure job. However, around 70% of the respondents' 'on-arrival job expectations' have changed after migration to Australia. In Australia, unemployment, and mismatch rate among Bangladeshi immigrants are respectively around two and four times higher compare to Bangladesh. Moreover, time-related underemployment is around 25 to 29 times higher among Bangladeshi immigrants in Australia. Only around 24% of the immigrants' have been able to use previous skills/qualifications in their current jobs in Australia. After migration, on an average, each of the respondents' has lost around 15 hours of per week productivity. There are 76% of cases, in which immigrants' current area of occupation does not match with the occupation shown on their visa applications.

Bangladeshi immigrants are more likely to be unemployed or underemployed in Australia. A high level of downward occupational mobility and a kind of 'brain-waste' exist among Bangladeshi immigrants living in Australia.

P0906

Trend and Conference of Labor Cost Changing in China

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Labor cost in China has been experiencing continued changing since 1998: rapid increasing in wages of workers, steadily increasing in social insurance charges, and slightly increasing in relative cost considering the effects of productivity. It's argued the labor cost advantages will weakened significantly.

Key factors causing the changing are discussed. (1)Changing of supply-demand relationship in labor force market accounts for part of the increase of labor cost. Growth of working-age population has been slowing down with the population ageing. Meanwhile the high economic growth has maintained the demand for the labor forces. (2)Increase in living cost is another important factors, which makes the low wages for the workers unacceptable. Low-wage especailly for the rural migrant workers, was once widely adopted in the past 30 years. (3) Wage policies contribute directly to the increase in labor costs. It was indicated in the "Provisions on Minimum Wages 2004" that the minimum wage should be adjusted in two years, and the minimum wages has been raised timely since then.

There're evidences that labor cost will keep increasing in the next 20 years in China. But it doesn't mean the coming of labor shortage which used to occur in coastal areas and external processing industries. Based on the analysis on population transition and urbanization, the population opportunity window would not be closed untill 2035, and the proportion of rural population will be lower than 70 percent until 2030. It is estimated that labor cost will increase accopanying with labor surplus in general and structural shortage.

It is discussed that measures could be employed to maitain the competitive advantage with the direct labor cost increasing in China: Promoting the productivity through changing economic increase mode; Promoting industrial transfer to ; Improving the investment and development environment, enlarging the domestic demand to maintain the steady growth of economyImproving the investment and development environment.

P0907

Age-Specific Labour Force Projections in India, 2000-2050

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With the age structural transition in recent past, increasing number of labour force has significant implications for the economy of any country. It has been remarkably evident that the demographic dividend shall encourage economic development in the developing county, such as, India. However, coping of the demographic change to cash the window of opportunity in any Nation should be in such a way that it provide education with employment opportunity and encouraging of women labour force. Most of the available researches are focused on labour force participation of prime workers or aged 15-59. While, with the higher growth of elderly in future it is also important to know their work participation rates to know their actual dependency on working aged population. Therefore, the present study attempts to project age specific labour force by industrial sector, sex, residence and state of India. Further these work participation rates are linked with population and old age dependency ratios are calculated with the adjustment of work participation of 60 plus and 15-59 age group. Cohort entry and exit rates are applied to project the age specific participation rates for each group. Two quenquannial rounds of National Sample Surveys (NSSO, 1999-2000 and 2004-05) are used to get age specific participation rates for base year population.

Female work-participation rates have increased from 546 to 610 per 1000 females, while male work-participation rates have declined from 869 to 806 per 1000 males. When it comes to age pattern of WPR it is found that WPR is positively, negatively and normally skewed in primary, secondary and tertiary sector. Industrial transition from primary to tertiary sector is clearly visible in new entry of labour force. Among females it is interesting to notice that older-adult women participation is higher than that of prime age group in 30-49 years regardless of residence background and secondly female WPR start declining in later age of later by 5 years than that of male the possible explanation the older women are mostly involve in marginal activities and in unorganized sectors. From 2010 to 2050 female WPR at old age have shown momentum of gain that too prominently. This pattern is in contrast to the pattern for male WPR. Finally this study concludes that old age dependency is going to increase significantly, even if we control for work participation rates for elderly and young working age population.

P0908

Floating Population and Their Employment in Guangdong, China-Based on the Demographic Data of the Sixth Population Census

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China has witnessed the great change in population situation since the fifth population census in 2000. Also, the change in size, structure, distribution and living condition was observed in the sixth population census. Based on the demographic data of the sixth population census, Guangdong province ranked first in residence population and owed the huge quantity of floating population. As the economic development of hot spot, local resources of labor power were far below the need of economic development in Guangdong without the supply of floating population. However, the high-quality talent in Guangdong province was much lower than Beijing and Shanghai. This situation could not adapt to the future social development. This paper is aimed at analyzing the condition of employment and labor force demand and put forward a policy-related employment proposal for floating population, in order to keep the pace with economy and society development.

P0910

Job Changes and Ties Usage in a Labor Segmented Market: Based on the Data of 2008 Chinese General Social Survey

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Based on the data of 2008 Chinese General Social Survey (CGSS2008) data, the article examines the distinctions between strong ties and weak ties used by job changers with different ownership in the sense of labor market segmentation in China. The results show that job changers outside system tend to use weak ties to obtain better jobs, while in the inner system, jochangers using strong ties are more likely to obtain better jobs than those using weak ties. Based on this, the author discusses and verifies the weak/strong ties hypothesizes which were posed by Granovetter and Bian.

P0911

Urban Rural Connectedness and Commuting of workers: Evidences from India

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In developing economies, the connectedness between rural and urban regions, is studied under the light of migration of workers (analyzed using Harris-Todaro Model). But this is not the only way to connect urban and rural labour markets. Another form of movement of labour which may act as an alternative to migration is the commuting of workers. With increasing urbanization in developing countries like India, the phenomenon of workers regularly travelling to their workplace across the urban-rural boundary has become very evident. In 2009-10, 8.05 million workers not engaged in agriculture commuted from rural to urban areas for work while 4.37 million workers not engaged in agriculture commuted from urban to rural India for work. A disaggregation of the number of commuter workers by residence reveals that size of the commuter work force is higher wherever rural-urban connectedness is higher. The states adjoining Delhi have a large number of rural residents reporting working in urban areas. The four southern states account for nearly 25 percent of such workers while Maharashtra and Gujarat account 11 percent of workers living in rural but working in the urban areas. These states have higher levels of urban population. Of the 5,161 towns in India, the four southern states along with Maharashtra and Gujarat accounted for 2091 towns while these states accounted for 161 out of 384 urban agglomerations. Hence it is not surprising that along with the states adjoining Delhi and above mentioned states account for bulk of the rural-urban and urban-rural commuters. This paper aims to study the commuting pattern of workers through their location choice (workplace and residential location choice). Using insights from the urban economics literature in developed countries, where commuting decision plays an important role in the urban-suburban spatial structure and location choice of workers, we study the commuting decision of workers through their individual, socio-economic and regional characteristics. Using NSSO survey 2009-10 on employment and unemployment (66th round), we estimate a multinomial logit model to understand place of work (urban, rural or no fixed place) choice of rural and urban resident workers. We find that regional factors such as high levels of urbanization, high unemployment rate in rural regions and proximity to big urban agglomerations induces workers to commute to work in urban areas. We also show that women and workers in higher age groups are less likely to commute to their place of work, whereas educated workers are more probable to work in urban areas. We also analyze the impact of seasonality in labour demand and migration level in a region on commuting choice of workers.

P0912

The Development of Integrated Strategies to Relieve AIDS Problems among Targeted Labor Groups

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The study on "The Development of Integrated Strategies to Relieve AIDS Problems among Targeted Labor Groups" aims at studying the characteristics of work of affiliated organizations and agencies, workers' opinions on integrated working and guidelines for development of integrated strategies to relieve AIDS problems among targeted labor groups. Methods of study include a survey of opinions of 155 executive and operational AIDS workers by using a questionnaire, a small discussion group of 16 backbones of social movement leaders to consider highlights from the survey, and special interviews with 2 active AIDS movement pushers. Percentage and relationship tests among variables at comparative different values of 0.10 are applied for the analysis of data.

The study finds that the sampling groups are more females than males. Most of them work with their present organization less than 14 years. The characteristics of the organizations are more in connection with AIDS than labor and have specific scope of work. Integrated work operation in the past included training activities, rights solicitation, welfare provision for the targeted groups, exchange of information and establishment of a Sub-committee on the Prevention and Correction of AIDS Problems. With reference to the possibility of future work integration, it is found that solidarity is time-consuming and budgetary binding to enable both networks to work jointly. Personal factors effecting difference in the stipulation of integrated strategies are gender and duration of work with present organization and the scope of work, position and work areas, fixation of targeted groups, and exchange of information. Important organizational factor which is related with all aspects of strategies stipulation is scope of work. Conclusions drawn from the small discussion group and the interviews point out that possible integrated strategies must take into account context integration between AIDS and labor, as well as work process integration of the two organizations with specific characteristics.
The study recommends that to enable effective development of integrated strategies to relieve AIDS problems among targeted labor groups, the government should raise or address the policy on AIDS issues as a national agenda, stimulate proactive work of the National Task Force on AIDS and revise its work structure, constantly update information on AIDS, and allocate budget for new activities. At the organizational level, the networks should consider the importance of joint work contents, the set up of key leaders in social movement, and potentiality development of workers by equipping them with skills, knowledge, and attitude toward integrated work on both aspects.

P1001

Mother's Health Knowledge and its Influence on Childhood Morbidity, Medical Care, and Medical Care Expenditure in India

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Though, it is largely agreed on the fact that education promotes health knowledge, but it is difficult to say that education is equivalent to health knowledge. Immaculate health knowledge is required for mother to understand her child's health problems. This study is an effort to measure the health knowledge of women (aged 15-49 years) and systematically relate it to prevalence of short-term morbidities among their children (aged 0-59 months) and medical care in India.

First, to study mother's (of age-group 15-49 years) 'health knowledge' by their background characteristics; second, to assess prevalence of short-term morbidities among children of age-group 0-59 months, related medical care and expenditure on medical care by health knowledge and background characteristics of mother by using nationwide data (IHDS, 2005).

The India Human Development Survey 2005 (IHDS) has provided data related to women's health belief and practices. IHDS is the collaborative project of researchers from the University of Maryland and National Council of Applied Economic Research (NCAER), New Delhi.
Principal Component Analysis (PCA) is used to generate 'health knowledge index' which is categorised into 1) no or low knowledge, 2) medium knowledge and 3) high knowledge. Multinomial logistic regression analysis is applied to estimate the socioeconomic predictors of women's health knowledge. 'Multiple Classification Analysis' (MCA) conversion model is used to estimate the adjusted percentages of women's health knowledge by their background characteristics. Bivariate relationships of health knowledge of women and child health outcomes are tested for statistical significance with Pearson's chi-square test. However, the ANOVA is used to test the statistical significance of health expenditure variation on short-term morbidities.

This study established theoretical constructions and evidential relationship between mother's health knowledge and child health. Though, socio-economic characteristics are important predictors of child-morbidities. Still there's huge variation in the prevalence of child-morbidities within the socio-economic strata by health knowledge of mothers. These variations are greater among socio-economically advanced groups than their disadvantaged counterparts. Results reveal that greater proportion of higher health knowledge women are taking their children to better medical care for treating short-term morbidities of their children than women with lower health knowledge. Similar pattern of results also indicated for related expenditure on child-morbidities. Greater proportions of multivariate analyses are statistically significant at 1%.

A health knowledge index could be an important composite predictor of health standing of the population of a given country or community. Misconception or the absence of correct health knowledge will lead to adverse health outcomes.Necessary health education for women can effectively help in improving health outcomes of their children. Social equity with respect to distribution of facilities to gain health knowledge, medical assistance, and income in terms of affordability are very essential to be established.

P1002

ICT Education among the Sri Lankan Youth: A Key for Development

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The general objective of this study is to elucidate the level of computer education and exposure to the internet among the Sri Lankan youth (aged 15-29) based on their main activity, namely- student, employed, unemployed and inactive household members. To achieve this objective, quantitative data were collected in 2009, administering a questionnaire to a national sample of 2921 households.
For the purpose of the study, a person was deemed IT literate if a person could operate any selected function on a computer by themselves. The key finding of the study was that, out of 2921 respondents, 57% of the youth were computer literate. Of the 18-24 age group, 65% could manage basic functions of the computer as opposed to 43% of the 25-29 years. This pattern indicates that the older group had a lesser opportunity at gaining a computer education, as it is a fairly recent development.

Moreover, when respondents were demarcated by their main activity, it became evident that the student population had the highest level of exposure to the knowledge in computers with a three-quarter (75%) being computer literate. The lowest attainment of computer literacy (30%) was demonstrated by the category of persons who were engaged in household work. Almost 60% of the male respondents were computer literate when compared to the 55% of their female counterparts.

In total, 33% of youth who have the basic knowledge in computer usage have their own computers. In terms of their main activity, the employed category was the highest (38%) to have ownership of computers. As is depicted by the survey, out of the 57% youth who are computer literate, 50% use their computer on a daily/weekly basis indicating the frequency of their use of computers.

Of the total youth interviewed, one-third had used the internet. The highest percentage of internet usage (42%) is observed among students, while the lowest is among the inactive household members. When the purpose of use of internet was analysed, 35% used it for academic purposes.

Students have the access to the internet mostly via their educational institutions which implies that they have access to internet from their educational institutions free or with a very nominal charge. Almost 52% students have the opportunity to access internet through their learning centres. Whilst observing by gender distribution, a higher proportion of interviewed females use the internet in academic institutions more frequently than the male respondents. It is becoming evident that the internet presents risks as well as opportunities to adolescent development in the knowledge-economy. By capitalizing the opportunities of internet, Sri Lanka could produce skilled youth to cater to local and international labour markets which will be a major leap forward for the growth in the knowledge economy.

P1004

Human Capital and Population Development in Pakistan and the "Cannon or Butter" Dilemma1

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The challenge facing Pakistan is very clear. Either it manages to dramatically slow population growth- increasing from 33 million according to the first census taken in 1951 to 132 million in 1998 and estimated at 185 million in 2010- and educate its children, the country's future labor force, or it will have to deal increasingly with a large uneducated working age population that will increasingly put the country at risk of political unrest. Specifically, large youth cohorts have been associated with higher risks of political violence in developing countries, where young people have few alternatives besides unemployment and poverty (Collier 2000, Goldstone 2001, Urdal 2006). Pakistan is at risk of similar destabilization. The other danger is that the country will be stuck in a poverty trap, where low levels of education and high population growth rates prevent it from driving the road to higher development. Because education and population have such a large momentum, the window for action is actually not very wide. Any delay in investing in education now will have repercussions in the future. In 2010, with 37 percent of its population below age 15 (UN 2008) and 44 percent of the working-age population (20-64) having never been to school, the government spent less than 3 percent of its GDP on education, increasing from less than 2 percent for the period 2000-20052. Women are particularly disadvantaged in accessing education; 64 percent of the working age population with no education is female and women barely make up one-third of the secondary and tertiary educated working age population. The country is nevertheless experiencing a decline in birth rates and population growth is beginning to level off as part of the demographic transition. Hence Pakistan will experience a demographic bonus. In this context, human capital will be central to the realization of this window of opportunity for rapid economic growth and further investments in education and infrastructure. The purpose of this chapter is to explore the present and future human capital of Pakistan. In the following analysis, we only focus on the educational attainment aspects of human capital by age and sex since data on health and labor force participation are difficult to obtain. Besides, the educational composition of the population is one of the most important factors for economic development (Lutz et al. 1998). The chapter will assess the potential for the achievement of the United Nations' Millennium Development Goals (MDGs) and education for all in Pakistan, especially universal primary education and gender equality. It will also assess how realistic national goals on educational attainment are in view of the present speed of change in the education sector, using the population projections methodology.

P1005

An Analysis of Educational Progress in Terms of Enrolment, Dropout and School Continuation of Children in India

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In this paper an attempt has been made to analyse the progress in school attendance pattern with three indicators: never enrolled, dropout and currently attending with a special focus on the 10-14 age group. A comparative analysis of the extent of never enrolled in the age groups just above and below the 10-14 age group is also done to capture the changes over time. The analysis is done at national, state and district level. The analysis takes into consideration different socio economic and contextual variables to determine its association with opportunities like attaining quality education. For assessing the situation in remote areas special attention is given to some infrastructure related variables like distance to the nearest town, all weather road connectivity and mode of transport. Further, we analysed the reasons leading to school dropout in the country.

Bivariate and multivariate analysis was carried out initially to examine the behaviour of the three indicators to decide upon further analysis. Disparity in school enrolment was examined by Gender Parity Index. Cluster analysis was applied to find out similarities in pattern of school continuation among the major states and survival analysis was used to examine pattern of dropout. From the analysis it was observed that although percentage of never enrolled has reduced over a period of time but significant differences exist amongst the states. Even though place of residence is an important factor in the magnitude of never enrolled, dropout and school continuation; the results of regression analysis suggest that presence of adult literate female in a household helps in changing the gap of never enrolled in a positive direction irrespective of residence background. Another salient finding of the study is that urban poor has the highest risk of both never enrolled and dropout among all categories of independent variable. In rural areas all weather road connectivity is an important factor determining school dropout, more the distance higher the chances of dropout.

Further, the analysis reveal that main factors of never enrolled and dropout are household poverty and social cultural reasons followed by school related factors which include accessibility and affordability of educational services. It is also important to mention that dropout due to school related reasons are highly reported from urban than rural areas. It is observed that at primary level, reasons for dropout are similar for both male and female. But with increase in age, more girls' dropout because of school related reasons and boys because of household related reasons. The pattern of school continuation also imply that although equal percentage of male and female start education from primary level but the percentage of continuation declines sharply for female particularly for rural female when they move upwards the educational ladder.

P1006

A Study on the Development Pattern of Education of Female Gender: A Special Type of "Cohort Analysis"

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The importance of female education is quite well known, still it is neglected since two or three centuries back probably because of some religious dogmas, superstitions prevailed in the society. The present study was to exhibit educational development among females or daughters by adopting a cohort analysis. As rural areas need special attention in order to raise the standard of education, the survey data (1982-'83) are based on rural areas of one of the major states in India like Bihar, where level of education is still a stumbling block for the overall development of India. The period of data may be old, but the methodology never gets old. The kind of technique applied in the paper in such a way that attitude of mothers toward educating their daughters is important. The study takes into account different socio-economic group of population, so that more insight of the society's involvement could be known. The study emerges that backward classes, like scheduled caste Hindu families and Muslim mothers were becoming aware of the need of education of their daughters over time and this was the crux of the methodology adopted. No doubt, still more path has to be traversed. However, upper caste groups were already found raising the standard of education of their daughters.

P1007

Education Structure, Human Capital and Employment

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This paper clarifies that the structure of education should be considered when analyzing its effect in economic growth through its enhancement in human capital, which also means that the human capital cannot be simply calculated by one's years receiving education. Nevertheless, Chinese human capital has not been enhanced by education. Its stock of human capital can hardly turn into productivity as the investment in different grades and specialities in China are decided by the government which may lag behind the market in making decisions.

The investment in education has long been identified as a source for long-run growth in an economy through its effect on the human capital. While the fact that the education may not increase the productivity of human capital for granted has always be neglected. We may not consider the productivity between the person who uses his knowledge of PhD in working and the other person only use the knowledge of bachelor the same though they have the some PhD degree. The course of PhD has not increased the productivity of the human capital for the second one. The effect of education on economy through its effect on human capital can be realized only when all the knowledge acquired by people is utilized in the process of production.

So the allocation of investment in education between different grades and specialties should match the demand of the market. The first trade-off is the allocation between different grades. As our market may not need so many people with higher degree, the decision should be made about which level of education should get the most investment considering the demand of the market. Importantly, considering the fact that the market may need people expert in different fields, the question about the trade-off between the investment in different specialities of education arises.

In China, almost all of the educational expenditures are financed by public investment, thus the government plays an essential role in making the decision about which level and which speciality should get the highest portion of investment. As the changing in the allocation of investment made by the government may lag behind the changing in the demand made by the market, the equilibrium point can hardly be reached. This may give rise to the situation, which is true in China, that some industries experience surplus labor and unemployment while the other may be in lack of labor simultaneously. By analyzing the labor force market in China, we argue that to increase the productivity of human capital and the investment in education, we have to broaden the educational horizons and optimize the structure of education. Only in this way, can we improve the labor efficiency.

P1012

Korean Ultra Law Fertility and School Population Education as a Population Policy

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The changes of lifestyle and value-structure during the last 40 years have changed the Korean consciousness on marriage and child. The changes resulted in Korean population becoming the lowest fertility and the fastest ageing society in the world. We think the present Korean ultra low fertility will impose heavier burden on her society than the past pro-fertility. When we try to reduce the differences between social and personal values, we can experience both sustainable development for society and higher quality of life for the people.

First of all, we have to try to introduce the present population changes and their socioeconomic effects to the school teachers and children's parents. Because most of them were taught that the birth control was helping better life during their school days. And then, it will be more successful for the school children to get family friendly values related with marriage, child and gender equality.

The important point of school education is to educate "values" not "the value-itself". The changes or formation of personal values takes a long time. It is important that the education on school children's values related on marriage, family and gender equality should be concentrated to win the sympathy on society friendly values among them. This is the aim of the population education for the values on marriage and family friendly of the school children.

P1101

Initiatives Towards Solid Waste Management in West Zone, Delhi: Role of Public-Private Partnership and Community

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A high rate of growth of mega-cities population and increasing per-capita income has resulted in enormous solid waste posing a serious threat to environment in cities. In developing countries, large quantities of solid waste are dumped haphazardly, thereby, putting pressure on scarce land and water resources. In India, after using recyclable and reusable material by rag pickers, the waste is dumped in open pits which causes sanitary and health problems besides contributing to methane generation. Waste generation is not new in urban India, or any parts of the world but the main challenge is an effective, efficient and sustainable management system which still rare in India. The present study focuses on the different initiatives adopted by Municipal Corporation of Delhi (MCD) for an effective control of solid waste management in the west zone. The zone produces around 1,600 metric tonnes of solid waste per month which is around 12 % of the total solid waste generated from 12 zones of Delhi. Multiple sources of data- primary, secondary and newspaper reports is utilised for the purpose of analysis. Result shows that Public Private Partnership and role residential welfare association is crucial for effective management of solid waste in this zone. Waste segregation which used to be a totally neglected affair has witnessed improvement. Awareness is increasing among the people through several awareness camps about the benefits of segregation at source. Relevant technical inclusions, such as Global Postioning System based traction system for the vehicles, state-of-the art complaint redressal system, use of wireless and cell phones has resulted in better co-ordination, improved community participation and operation. Thus Solid Waste Management, which was one of the most poorly managed civic activity has transformed into one of the most well managed one.

P1102

Climate Change, Population Migration and Social Instability in China：246B.C-1913A.D

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Based on time series reconstrution data on temperature, natural disaster, rice price, population and social instability in China over the past 2000 years, this paper tests the correlation between climate change and social instability in the short and long run. It finds that climate change is an important factor influencing Chinese social instability, namely, a higher (lower) temperature over (to) the mean, reduces (raises) the social instability, while the impact of snow anomaly is structural. Furthermore, these two proxies for climate change in chinese history both have long run impact on its social instability. Though other control variables such as natural disasters also exert their impacts on social instability, their impacts are less important than that of climate change. In addition, Classical economics maintains that population size was a heavy burden of Chinese economy as well as the level of its social stability, however, we find that this is misleading and imprecise at least in Chinese history, namely, a larger population size usually poses as a positive defense force against foreign intrusion. Unpon cloder climate change, the nomads' living was hit heavily, and they strengthen their robbery of the Han Chinese on the one hand and migrate eastward and southward, therefore the number of foreign aggression and internal wars take place more frequently. This verifies our basic analytic framework on climate change, population and social instability in Chinese history, and will become a valuable historical evidence for combating nowadays global warming.

P1103

Urban Water Supply Services - Challenges and Concerns - Case Studies of Five Cities in Karnataka

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Rapid Urbanization and its effects on the environment have made its impact felt in many facades of urban areas. Population explosion in smaller towns is a matter of concern as the local authorities are unable to meet the challenges more so with providing the infrastructure. Meeting the demands of providing adequate and quality water supply is a matter of concern. Availability, Accessibility, Equity and Quality have been matters of serious concern while issues related to environmental degradation have increased with ground water depletion and contamination. Climate change could add on to the already existing vulnerabilities.

Urban water supply sector is one of the sectors that have been suffering from inadequate levels of service, increasing demand-supply gap, deteriorating financial and technical performance. Although the Millennium Development Goal aims at halving proportion of the population without sustainable access to safe drinking water and basic sanitation by 2015, there is a long way to go to achieve the required changes. Providing safe and quality drinking water has been a challenge to the State governments and smaller towns are facing relentless issues of water access and quality. The paper addresses institutional performance in Hubli- Dharwad, Belgaum, Kolar and Ward No.39 of Bangalore city highlighting positive interventions/lacunas. Across five cities, 7300 households were surveyed and 756 groundwater samples were analysed. Discussions and interviews were held with Department officials besides the informal players - bore well drillers, water supply tankers and private sellers of water.

Water shortage and weak performance of agencies have resulted in increased groundwater dependence to the extent of 30, 51 and 37 percent in Dharwad, Hubli and Belgaum respectively whereas Kolar depends entirely on groundwater. In Ward 39 of Bangalore, striking realities indicates 873 tubewells within an area of 2.9 Km^2. Quality analysis indicated 45, 42 and 22 percent samples as non-potable in Dharwad, Hubli and Belgaum respectively, and 97 percent in Kolar. Emerging water markets with booming borewell business captures annual turnover of Rs. 50 crores in Hubli, Dharwad and Belgaum, while, Bagepalli Taluk (Kolar district) tops the list with Rs. 12 crores. The chaotic situation is due to failure of institutions and lack of effective policies. Given the seriousness of the situation, it is imperative to address the problem and seek options with a holistic perspective. Key issues with growing population and inadequate infrastructure should be supported with an interdisciplinary approach.

P1105

Social Demographic and Environmental Determinants of Choice of Bottled Water at Household Level in Indonesia

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The consumption of bottled water has been increasing both in developed and developing countries. So far, however, study on bottled water consumption behavior is limited, especially in developing country context. Different demographic, social and economic characteristics between developed and developing countries may result in different responses to the choice of drinking water. Using data from a nationwide household level surveys and a village level survey in 2008 in Indonesia, this study investigated the roles of social, demographic, and environmental factors in discrete choice models of primary source of drinking water at household level. The study found the proportion of population using bottled water increased significantly in the last decade. Further, the study shows that demographic of the household level is driving the decision to choose available sources of drinking water. This study has also reaffirmed the roles of environment qualities on drinking water choice. Different from previous studies, however, this study found significant effects of income and education indicating the overall difference on development status between developed and developing countries**.** The significant effect of household size and other household arrangement to the choice of drinking water shows that household arrangement and individual characteristics play equally important roles in choosing bottled water as an emerging alternative to the conventional sources on and networked piped water. This finding signifies the connection between population and environmental capacity in providing drinking water

P1106

Mixed Farming in Bangladesh: Problems and Prospects Effecting Ecological Balance

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Rural economy of Bangladesh is by and large characterized by low productivity, pre-dominantly subsistence agriculture, huge unemployment and high growth of population and consequent rural poverty. To overcome these shortfalls disparate strategies had been undertaken by successive governments and new cropping patterns and cultivation practices received patronage. During planning and implementation of many of these activities long-term effects were rarely considered. In 1980s the Bangladesh government introduced mixed farming beside the existing traditional agricultural system in the southern part of Bangladesh. Initially, the newly adopted ideas and technologies proved to be economically beneficial, however, after thirty years it is acting as a destructive force damaging the local ecology, economy and social structure. The objective of this study was to examine the problems and prospects of mixed farming system which can effects ecological balance in the southern part of Bangladesh. The study has been conducted in a rural community named Puratan Kalshira in Bagerhat district of Bangladesh. Participant observation, FGD, key informant technique and in-depth interviews was done as research techniques. A labor-intensive mixed farming is a multiple production system which includes crops, duck and fish, on small-holdings, based on maximum recycling principles. The adaptation of mixed farming system left no space for agricultural off-season in this area. High use of HYV (High Yielding Varity) products in agriculture or mixed farming started the growth of trade and commerce. Fisheries, shrimp cultivation with seasonal vegetables and other crops had given scope to the villagers to come out of the traditional economic system and stimulated individual initiative and competitive attitudes. Although initially adoption of mixed farming brought some positive changes, in the long-run it has posed threats to the local environment as well as society and economy. Water logging in rainy season and unavailability of water in dry season makes vulnerabilities in cultivation. So they have to collect water from nearby fields for irrigation. The continuous exchange of water among cultivated fields pose threats of contamination of soil and water with over dose of fertilizer, pesticides and insecticides. Apart from these cultivating HYV crops is posing threats to indigenous crops; many local varieties are now in the process of extinction due to excessive use of chemical fertilizer, pesticides and insecticides. Mixed farming is arguably associated with increased use of chemical fertilizer, pesticides and insecticides, resulting in increased soil salinity and ultimately reduced soil fertility over time and changed water and soil characteristics. The government must take urgent steps and arrange awareness programs and trainings for local farmers so that rational use of fertilizer and pesticides may help reduce long-term vulnerabilities those are created to avail some benefits which will be short-lived.

P1107

Food Crisis and Household Health: Implications for Mortality in Ogun State Southwestern Nigeria

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The world is in the midst of an unprecedented global food crisis due to shortage of almost all food commodities and increases in consumer prices which have become phenomena in most developing countries. The greatest impact of the crisis is on the vulnerable groups, such as young children and pregnant women, who are now at risk of becoming permanently malnourished with irreversible impact on the next generation. Higher food prices lead to lower calorie intake and an increase in malnutrition. Malnutrition contributes to poverty it causes or aggravates illness, lower cognitive function and thus educational attainment, reduces productivity, and relegates the individual to reduced options for livelihoods. The effects of food crisis on children and their families are particularly grave. The ripple effects would reach other areas of development; a global food crisis could erase and even reverse the accomplishments made towards achieving the eight Millennium Development Goals
It is therefore, imperative to provide adequate and timely information about the dynamics of food security at the household level as well as the nutrient intake of pregnant women, nursing mothers and their children as it affects their health which will help in reducing the high maternal and infant mortality in the study area The paper therefore examines how the food crisis affects household health with particular reference to women and children in urban centres.

Both qualitative and quantitative methods were used for data gathering. For quantitative data the Questionnaire method was used and for qualitative, Focus Group Discussion (FGD) and In-depth interview were used for the collection of data. In order to make the sample size representative of the whole population in the study area, multistage sampling technique was used to select 300 respondents.

The study reveals that increase in the prices of food commodities has affected the income of the family 65% of the respondents spent more than two -thirds of their income on feeding while only 8% can afford balanced diet in their homes. Forty -five percent of the respondents indicated that one of their households especially children under five years had one illness or the other in the last three months preceding the survey. On the health of the nursing mothers, 11% of the mothers had shortage of blood during delivery while 18.3% indicated that their babies had anaemia. Only 23% of the women interviewed practise exclusive breastfeeding. The study reveals that there is a significant relationship between household feeding pattern, and ever had illness. On coping strategies majority of the households now cook once and patronised food vendors. Some of the respondents are now depending on their neighbours for survival. The study suggested that government needs to subsidise common stable foods and increase investment in agriculture

P1108

The Efficiency of the Process of Crop Production in Its Effort to Anticipate the Acceleration and Adaptation of Climate Change

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This scientific work aims to study the consumption of the use of farmers' production costs by the farmers themselves associated with the acceleration of climate change and related to the efforts of finding solutions for adaptation and mitigation more quickly, and very much needed for vulnerable groups of farmers. Agricultural production is highly vulnerable to feel the effects of climate change that occurred in Indonesia, namely: chili farmers and fruit farmers. Farmers who grow crops in crop species are now feeling the shock and confusion in the face of some new pests and diseases as a result of extreme weather changes during the last two years 2009 and 2010 with its peak in early 2011. Climate change has made the development of a caterpillar into uncontrolled number and spread, and makes seeds and chili crop production totally failed although the farmers have tried to crop them many times. Process repeating of agriculture which is failed is the wasted costs use in the process of agricultural production. Therefore, it is through this research that the system of adaptation, mitigation and how to grow peppers and fruits by using the cost in the production process which is more efficient and how to maximize a successful outcome is expected to be found. The research is conducted sporadically at the national level in some areas that experienced a very severe condition. The energy savings analysis is conducted descriptively from the result of the conversional calculation approaches on the cost of agricultural production costs fully spent in the production process based on the type of plant. In the end, farmers who are easily affected and are not knowledgeable and to adapt with climate change can be strengthened and be knowledgeable by using the results of this study.

P1109

The Social Dimension of Poverty Reduction: Climate Change and Vulnerability

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Climate change and food security are two sides of the same coin due to its link to poverty reduction. Climate Change can adversely affect the government's investment for poverty reduction through their impact on food security. Climate change can affect food production though increased floods, sea level rise, temperature increase and seasonal shifts. By adversely affecting food production, people's livelihood, especially in developing countries where they have difficulties in meeting the demands for food of the people, climate change has increased that risk of becoming poorer tremendously. Climate change disrupts food production and causes uncertainty to farmers. The increased insecurity and unsustainable work, particularly in the agriculture sector will produce a huge number of unemployment and eventually leads to higher the poverty rate, hampering the poverty reduction efforts of the government.

It's not easy for farmers to shift from their agricultural job and into other types of work because many believed in preserving the cultural heritage of their ancestor. In addition to being the main source of their livelihood and they also wished to maintain the job for the next generation. Vulnerable population is working mostly in the agricultural sector, in which many are classified as poor. Those vulnerable-poor people who are mainly working in informal sector are more double compared to the number of people working in the formal sector, with very low education background and less skilled. This vulnerable population must be empowered in maintaining food production while facing climate changes through mitigation, adaptation and knowledge transfer, should be applied the integrated policy programs on those. The social impact of distribution consequences of local/regional/national/international policies associated with green economy, climate changes, poverty and food production is a challenge to be assessed in developing countries. The result will support the creation of policy programs and lesson learnt for others.

P1110

Climate Change Resilience and Universal Access to Family Planning: Exploring the Connections

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Does universal access to family planning services also improve people's resilience to climate change? Demographic projections from two sources (results from the medium United Nations projection and a projection including universal access to family planning, or UAFP) and two climate-change-related models (used in sequence) yield insights about the relationship between population size and resilience for seven countries: Bangladesh, Nepal, Haiti, Ethiopia, Kenya, Malawi, and Uganda. Principal findings include the following: (1) Resilience to climate change was higher in all seven countries under the UAFP scenario by 2050**.** (2) In the areas of human health and human and civic resources, all countries showed improvement and most were projected to increase resilience to climate change by more than 30% under the UAFP scenario. (3) Food security projections varied widely by both scenario and country. In Haiti, Kenya, Malawi and Uganda, the medium scenario resulted in reduced food security, but the UAFP scenario yielded improved food security; at the other end of the spectrum, Bangladesh had only a slight additional gain under the UAPF scenario. (4) In all countries, environmental capacity worsened under both scenarios, although less so under the UAFP scenario.

The purpose of this study was to point to further questions and analyses that will help focus on areas where population and resilience research can be strengthened through integrated analysis, either by building on existing strengths or addressing weaknesses. Combined with on-the-ground experience in a country, the resilience changes and rates of change can be investigated and challenged, leading to better identification of needed adaptation strategies; the implications of slower population growth; and the benefits of families that are smaller, healthier, better educated, and more productive. Improvements in both population projections and model representations of demographic information will enable such analyses.

P1115

Role of Local Government of Bangladesh in Social Mainstreaming of the Environmental Migrants and Climate Refugees

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Bangladesh is the largest delta which is characterized by unique geography and flood plain dominated geo morphology. Hydro geo-physical features as flat deltaic topography and sea facing low elevation pushed the coastal areas to extreme climate-change induced vulnerability to disasters like cyclone, flood, storm surges, river and coastal erosion, tidal surge, tsunami, salinity intrusion, water logging and so on which hampers the lives and livelihoods of people of Bangladesh. The affected people are forced to migrate to large cities for livelihood and survivability. The impact of rural-urban migration is visualized on the urbanization process increasing the number of urban vulnerable groups specially the number of environmental migrants and climate refugees. Environmental migrant refers to the people who are forced to migrate from or flee their home region due to sudden or long-term changes to their local environment, which is held due to increased environmental hazards. The study reveals that about 62% of the floating people moving to the city is due to reasons directly or indirectly linked with climate change. Those may be termed as climate refugees who become parasites to the urban system. Government initiatives should be continued to integrate them in the mainstream of urban system. The study has been conducted based on primary data collection on the demographic, livelihood pattern and way of living of the climate refugees following systematic random sampling. They may be grouped into different categories such permanently migrated, partly migrated but hope to return home, not migrated but refugees in their locality. One of the major challenges for the Government is addressing climate change induced vulnerability. It is not possible to mitigate the insurmountable loss by the central Government alone by top down planning approach through its concerned departments. Hence, there is felt a strong participatory approach through partnership among central Government, local government institutions, donors and the civil society organizations to mitigate the problem. Structure of local Government system exists basically in two form as urban and rural local Government. The major cities of the country have been declared as City Corporations. The rest medium sized towns to small urban centers are regarded as Pourashavas by legislative provision dividing into different categories. Structure of Rural Local Government comprises Upazila Parishad and union Parishad. The study reveals the pattern of livelihood of those affected people and analyses the specific roles and responsibilities of different tiers of the local government institutions in economic and social mainstreaming of the climate refugees. Local Government should be able to deal with the problems of the environmental migrants and climate refugees adequately through financial, administrative and technical capacity building for a sustainable support mechanism to address the issue.

P1201

Using CensusInfo Technology to Support Census Data Dissemination in Asia

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One of the major lessons learned from the 2000 round of the World Population and Housing Census Programme points to the importance of better dissemination of data collected through censuses, to support its wider use in research, analysis, and decision-making. Census results are typically published in tabular format - whether in print or on the web –thereby limiting their use. Furthermore, many interested data users encounter language and/or other access barriers, such as the data being restricted or only available domestically in print format.

For census data to be truly useful, it needs to be easily accessible to the national and international community via the Internet in multiple languages. Potential users need easy, quick access to data in all of their customized disaggregation: by sex, age, geographical sub- levels and time period, for purposes of research, analysis and decision-making.

This presentation focuses on the role of the CensusInfo initiative in helping countries in Asia disseminate their major census results at all relevant geographical levels. Particular emphasis will be given to the following country experiences:

1. India

The Ministry of Home Affairs of the Government of India launched the CensusInfo 2011 Dashboard application in July 2011. The CensusInfo 2011 Dashboard provides a single-view visual report on provisional state-level population data collected in the country's 2011 census round. The dashboard will soon be updated with district-level data disaggregated at the rural-urban level.

2. Indonesia

A CensusInfo adaptation for Indonesia is presently under development.

3. Sri Lanka

A CensusInfo adaptation for Sri Lanka is presently under development.

CensusInfo is a royalty-free database system that provides a method to organize, store and display data in a uniform format, to facilitate census data sharing across government planning sectors, development partners, demographers and academicians. CensusInfo was developed by UNSD in partnership with UNICEF and UNFPA and has been adapted from DevInfo database technology. There are currently many countries with nationalised adaptations of CensusInfo across Africa, the Middle East, Asia, and Latin America and the Caribbean.

An integrated desktop and web-enabled tool, CensusInfo contains simple and user-friendly features that can be used to produce tables, graphs and maps, for inclusion in reports, presentations and advocacy materials. Database administrators can manage their sets of national, regional and local indicators within the database. The system also has a data exchange module for importing census tables from industry-standard statistics software packages.

Although National Statistics Offices or Census Bureaus are the prime candidates to create official country-specific CensusInfo adaptations, demographers, researchers and policy institutes can easily use CensusInfo as a tool to support their research, analysis and policy-making objectives. The application allows for dissemination of census data online or CD, extending the reach and use of census results.

P1203

Household Wealth Status, Spatial Characteristics and Ownership of Health Insurance among Women in Ghana

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Economic reforms that were implemented in developing countries in the second half of 1980s brought austere cuts in public financing and public health financing was inevitably affected. This led to a replacement of heavily state-funded subsidised healthcare with out-of-pocket health care payment. These reforms had serious impacts on quality of healthcare and public health insurance is considered a better alternative to reducing the constraints in health financing than out-of-pocket payment. The concept of insurance which revolves around risk sharing attempts to provide sustainable and reliable cost-effective means of accessing health care, especially, among the most vulnerable. Generally, women in resource poor countries are considered to be economically, socially and physiologically disadvantaged in access to resources. With Ghana establishing a national health insurance scheme in 2003, this paper discusses the combined effects of household poverty index and spatial characteristics on ownership of health insurance among women, using data from the 2008 Ghana Demographic and Health Survey. Using logit estimation techniques, we find significant statistical evidence that point to strong combined impacts of household wealth and space. However, on the merits of their separate impacts, thus wealth and region of residence, the effects are not as robust as their combined effects. Apart from the spatial effects, affiliation to Traditional religion significantly reduced the probability of subscription to the health insurance package. Interventions targeted at increasing coverage of health insurance therefore need to focus a great deal of attention on spatial variables that constrict insurance subscription.

P1204

Health Care Services in Bangladesh: Dimensions and Challenges

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Health is increasingly being recognized as critical human capital component, which contributes significantly towards the development of a nation. Health is a basic requirement to improve the quality of life. It is known that only a healthy and educated population can contribute to productivity, economic growth and human development. So, health is both an end of development and a means to it. The health care system consists of all organizations people and actions whose primary intent is to promote, restore or maintain health. Services delivery, workforce, information and financing etc., are the building blocks for strengthening of the health system in a country.

The current status and future challenges of health care system in Bangladesh can be conceptualized within the gamut of the aforesaid building blocks. The process of health liberalization and affiliated policy reforms initiated during 2000 have added a new dimensions to the efforts at bringing health care to the vast populace particularly the vulnerable groups. Despite being a resource poor country, Bangladesh has achieved impressive health care services but, these achievements are mainly quantitative while qualitative improvement is negligible. Health indicators like life expectancy, size of population and the rate of population growth are high while health level, literacy rate and technological skills are low than that of the other countries. Only half of its populations are literate. So, overall the country in strongly for sever poverty situation. The country is facing severe problems due to lack of institutional training mechanism, human resources, shortage of trained doctors and nurses. Lack of hospitals and experienced doctors at the local level, lack of participation and motivation, demoralization of women, neglect of responsibilities under conditions of poor management and non existence supervision are major challenges to health care services particularly in rural areas. Besides this, natural disasters, new and old infectious diseases, such as malaria, TB, HIV/AIDS are important threat to health sector.

For achieving health care services to all its citizen, there is need to increase allocation of resources to health sector as well as restructuring of existing policies and programmes. The present paper an attempt has been made to analyse the health programmes undertaken since independence and the health system itself to see which aspects of the policy will contribute to these dimensions and challenges. This paper explores the socio-economic differentials and factors affecting health care services in Bangladesh. This is based on secondary sources of data. The findings reveal that, financial and technical support (medical equipments) is very helpful to ensure health care services. Finally, the paper puts forward some suggestions to address these challenges. Thus, this paper will be useful not only for analysis but also for the policy building and advocacy.

P1206

High Fertility in the Philippines: A Push Factor for Precarious Labor Conditions and Human Rights Violations

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High fertility has been a constant in the Philippines in the past decades. Even though countries in the region with similar characteristics have decreased their fertility, Philippines has not been able to consistently attain a more reasonable population growth. Nowadays, the annual population growth of Philippine population is 2,04%. Highest fertility rates are unequally distributed localized in the poorest regions, usually in the South and in rural areas. The lack of an effective family planning policy has derived in a high unmet need for contraception, and couples have more children than those who can afford to support.

Internal migration and international migration are usually coping factors for population pressure in poor areas. The usual cycle is that migration abroad follows the internal migration to the cities. Most of the internal migrants jump from Philippines to another country as soon as they have the opportunity in order to look for an employment opportunity.

High fertility rates, especially in poor families, lead to an increased pressure in the economic resources and the labor market of the Philippines. At the same time, high fertility rates have contributed substantially to the creation of a desperate "reserve army" that is willing to accept to work in bad jobs and sometimes deplorable working conditions. As stated by a Philippine Non Governmental Organization, Filipinos usually work in 3D jobs, meaning: difficult, dirty and dangerous. There are the cases of domestic workers -that either in Philippines or abroad- come from rural areas in the provinces to work for 10% the average salary in the country and in deficient living conditions. There are also the cases of so called "entertainment" workers, who promised to have a decent job abroad they find themselves in a different reality when they arrive to the countries of their destination.

P1207

Achieving MDGs in India: The Importance of Investment in Young People

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Young people (aged 10-24) constitute about 358 million and represent about 30% of the Indian population. Not only does this cohort represent India's future in the socio-economic and political realms, but its experience will largely determine India's achievement of MDGs and the extent to which the nation will be able to harness its demographic dividend. While today's young people are healthier, more urbanised and better educated than earlier generations, a number of social and economic vulnerabilities persist that threaten the nation's ability to meet its MDG commitments. This paper traces the situation of young people in India and assesses India's progress in ensuring a healthy, educated, skilled and empowered youth population and in meeting the MDGs in relation to its youth population.

The paper will use data available from a variety of sources, including, for example, the National Family Health Survey, the Youth Survey and the Annual Status of Education reports to (a) explore trends in young people's situation and vulnerabilities; and (b) reanalyse, where necessary data from these sources to better understand the obstacles that young people face in acquiring the assets needed for a healthy transition to adulthood. Key outcome indicators include those related to the achievement of MDGs 2, 3, 4, 5 and 6 that have particular relevance for the young.

Study findings confirm that while the gender gap in school enrolment has narrowed, gender disparities in the completion of high school remain wide and disturbing proportions of school-going children cannot perform simple literacy and numeracy tasks. Access to livelihood skills training is limited and hugely gendered, with young women opting for skills (tailoring for example) for which market demand is limited. Girls agency is limited in terms of decision-making, freedom of movement, and control over resources and wide gender disparities mark the life of girls and boys. In the health arena, sexual and reproductive health remains a concern: sexual relations tend to be initiated early (within or before marriage), and sexual relations are often uniformed, almost always unsafe and for many young women, unwanted; unmet need for contraception is widespread, pregnancy occurs early and access to care is far from universal and maternal mortality persists; and considerable proportions of the young report symptoms of sexual or reproductive morbidities but fail to seek treatment. Mental health concerns also mark the life of the young and roughly one in eight young men and women report symptoms suggesting poor mental health.

Findings highlight that Indian youth face major limitations in the areas of education, marketable skills and health, as well as major gender disparities, which can adversely affect India's ability to meet its MDG commitments.

P1301

Early Marriage of Girls in Iran and Social Factors Affecting It

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Despite a shift towards later marriages in many parts of the world, 82 million girls in developing countries who are now aged 10 to 17 will be married before their 18th birthday. In some countries, the majority of girls still marry before age 18. For example, these include: 60 per cent in Nepal, 76 per cent in Niger and 50 per cent in India. In my own country, Iran, girls still get married early and many start having children while they are still in their teens. This is a threat to their health and their lives; maternal mortality is unacceptably high and the greatest danger is to the youngest women. Results of studies show that over 20 per cent in girls - from 7/7 per cent in Tehran to 40 per cent in rural areas of Sistan and Baluchestan - are married before age 18. Accordingly, the writer in the present paper, gathered based on census data and secondary analysis research findings, attempted to review the statistics of child marriages in Iran, the social causes and consequences of this issue. This study shows that the most important factors perpetuating girls' early marriage in Iran include poverty, a lack of educational or employment opportunities, religious pressures and type of residence (rural or urban). These variables have significant correlation with early marriage of girls. Early marriage also has implications for the well-being of families, and for society as a whole. The impact of early marriage on girls is wide-ranging. Early marriage violates a number of Iranian girls' human rights and vastly increases the risks to girls' and infants' health and opportunities. We want to promote an atmosphere in which couples are free to make choices, firmly grounded in maturity, and to wait until they are ready for marriage.

Keywords: Early Marriage - Child Marriage - Secondary Analysis - Gender Inequality- Human Rights

P1302

Divorce and Social Risk in Vietnam: A Decade Looking Back

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While divorce historically has been culturally discouraged and even a limited practice in Vietnamese society, after the renovation policy was launched in 1986, the divorce rate has been rapidly increasing.

This paper examines trends and correlates concerning divorce in Vietnam, and in doing so it identifies social and cultural factors influencing the divorce decision. The paper draws on divorce profiles registered in one rural and one urban district court over a period of 10 years (i.e. 2000-2009), and even on case studies of divorced persons from the same district.

The paper highlights that there are different variables which correlate to divorce, for instance, age at marriage, marriage duration, number of children, living arrangements after marriage, type of marriage, place of residence, employment, birth cohort, and the sex of a couple's children. Plenty of cultural factors, the paper also shows, are even involved in respect to a divorce including living arrangements, mother and daughter in-law relationship, extra-marital relations, childlessness, beliefs in destiny, and so on.

This paper also considers the social security of women after a divorce. A divorce typically leads to a dramatic decline in the standard of living for a woman not least because she would usually have custody of the couple's children. The ending of marriage, this paper would argue, disrupts relationships in almost all sectors of a woman's life. There would be changes regarding social support/relationships, finances, child care, housework, work demands, residence, and changes as regards social resources all of which mean great transformations.

P1303

Dynamics of Inter-Religious and Inter-Caste Marriages in India

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Caste and religion are important components of Indian society prevalent since thousands of years. Caste is an social evil which creates water tight compartment between communities and brings division, hatred and tension among various social groups. Marriages within the caste is the norm of the Indian society. To think of marriages between castes is a difficult and socially unacceptable proposition. The process of modernization, democratization and development has brought lots of positive changes in Indian society. The major objectives of the present study is to understand the patterns and factors of inter-caste and inter-religious marriages in India. The study uses the data of recently concluded nationally representative National Family Health Survey(NFHS-3, 2005-06)) having sample size of 43102 ever married women and their husbands. All the castes are grouped into four categories and arranged in descending order of caste hierarchy namely Others(includes all the higher castes), Other Backward Classes(OBC), Scheduled Castes(SC) and Scheduled Tribes(ST). If a woman belonging to higher caste marries to a man belonging to lower caste, then it is considered as an inter-caste marriage. Similarly if a woman belonging to a lower caste marries to a man of higher caste, then also it is considered as inter-caste marriage. It is found that about 10 percent of the total marriages in India takes place between castes(inter-caste) which is quite encouraging and a positive sign of change in the society. Of the total inter-caste marriages, in 5.6 percent cases women marry to men belonging to lower castes than the women. In case of another 5.4 percent cases, the women belong to lower caste but husbands belong to higher castes. There is large spatial variation across the various states in the pattern of inter-caste marriages in India.

P1304

Religion, Fertility and Coping among Indian Elderly. Evidence from National Survey

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Religion can shape ageing experiences and behavior in distinctive ways. It has been shown that, especially in some countries like India, religious practices and believes are not changing over the life course of an individual. Based on this established result, the present paper focuses on how religion affects fertility in earlier life and social support in later life. We first study how childbearing behaviours are reflected into current attitudes towards family size and roles. Second, we show the influence of religion on coping with ageing through intergenerational support to and from older family member, their participation in social activities, changing living arrangements as well as their perceived subjective well being.

Our focus country - India - has a strong religious-caste system and according to estimates of PEW Research Center (2011) around 80.2% of the population are Hindus, 13.4% are Muslims and 2.6% Christians. Only 0.07% of Indians declare no religious affiliation. Moreover, the demographic indicators are facing a rapid change, with fertility levels falling from very high to low and average family size shrinking, albeit family relations remain the center of social support in India as in most Asian societies.

Several behaviours and believes guided by religion may affect one's decisions of fertility as well as the individual ageing, with impact on health and life satisfaction. For instance, if on one side ageing may have a negative impact on one's expectations of frailty and death, religion could positively counterbalance these effects: the "divine determination" may transform the perception of some life events.

Our study is built on a new survey called "Building knowledge base on ageing in India" carried out in 2011 by UNFPA. The survey includes information on around 8400 households which have at least one member aged 60 or above, both from rural and urban areas. The targeted sample consists of 7 states where the proportion of elderly is at least 8%. We will study religious affiliation and, for the Hindu majority, caste differentials.

Based on the results obtained about the association of religion with fertility decisions in earlier life, and with family structure and intergenerational support in later life, we expect to expand the knowledge on coping with ageing in India.

P1305

Women-headed Households and Changing Family Dynamics in India

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The transformation the Indian society has undergone over the last few decades, owing to the economic, social and demographic changes that have been taking place, have enormous implications on the structure and well-being of the family. The families in India are primarily patriarchal in nature with males as heads. The recent data however show an increase in the women-headed households in the country that mirrors a change in the ethos of the family. Although women-headed households have often been considered as poor compared to the male- headed ones, little is known about the well-being of women and children in these households. As indicated, female-headed households may be more vulnerable economically; however, there is a possibility that women in these households have better autonomy and decision making power mainly because heading a household gives them certain kind of power. If increasing women-headed households are a reflection of the transition from traditional male-headed households to more autonomous women-headed households, there is a ground to believe that women and children from households headed by women may be better off, compared to other types of households. This paper therefore looks into the linkages between female-headed households and the welfare of the women and children therein, besides looking into the trends in female headed households in India and its regional perspective.

The study uses data from National Family Health Survey-3, which provides information on headships of the households, different characteristics of the head as well as the economic, social and other demographic details of the household. Further, other information such as health, nutrition and morbidity among children, access to health-care and information on various autonomy indicators, decision-making capacity of the women etc., were also collected. Both bivariate and multivariate analyses are carried out to situate the different dimensions of woman-headed households in their right perspective.

This paper shows that the proportion of women-headed households in India is on the rise. These are more prevalent in the southern region than in north. Over all positive relationship was observed between headship and autonomy among women. Women from the female-headed households also enjoyed better freedom of movement and exercised control over money in comparison to women in male-headed households. Further, female headship has shown positive influence on health for self and children and in the education of children. Hence, an increasing female headship would mirror the changing family dynamics and eventually better welfare among the Indian women.

P1307

Marriage in West Bengal: A Regional Perspective

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West Bengal has been among the forerunners in demographic transition among Indian states with the fertility rate declining steadily since the 1960s. Despite having significantly lower levels of female education than in Kerala or Tamil Nadu, current fertility and mortality levels are comparable to the well-performing southern states. The latest Indian NFHS-3 findings suggest that the state of West Bengal may be digressing; in other words things have taken a negative turn. The proportion of women marrying by age 18 has increased considerably while the median age at first birth has decreased in the state when the reverse is happening in the rest of India. Furthermore, the proportion of women who were already mothers or pregnant at the time of NFHS-3 survey was above 25% in only 3 states - Jharkand, Bihar and West Bengal although the level of female education is far higher in West Bengal than in the other two states. This paper contends that regional context is an important determinant of marriage patterns and that West Bengal has more in common with Bangladesh than with Communist Kerala or with the neighbouring state of Jharkand, given the long political, religious and cultural history shared by the two wings of pre-Partition British province of Bengal. The paper documents that age at marriage has been historically low in West Bengal despite the state's vanguard position in social reform and female education since the colonial era. Using census, registration and secondary analysis of West Bengal NFHS data, the paper attempts to throw light on the reasons why prevalence of early marriage and consequently early childbearing may have increased in West Bengal in recent years.

P1308

Nuptiality Differentials in Korea

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Korea is one of the countries which have experienced fast fertility reduction in a relatively short period of time, and shows very low fertility level in the world. The total fertility rate was 4.53 in 1970, and it declined to 2.87 in 1980. It was 1983 when the TFR passed the replacement level. The TFR maintained 1.6-1.7 levels from the mid-1980s to the mid-1990s. However, thereafter it has dropped sharply to below 1.2 since 2002, and it recorded its lowest of 1.08 in 2005. Now it has slightly increased to 1.23 in 2010.

The lowest low fertility has been the key policy issues in Korea, and the government has adopted various policy measures to increase it. However, criticism has been arisen for effect of the government policies on increasing fertility. A recent study indicated that both tempo and quantum effect are equally important for the recent lowest fertility in Korea. However, the government's policy measures have mostly centered on quantum policies, and thus shift from quantum to tempo policy is urgently needed.

The age at first marriage has steadily increased in Korea. It was 27.8 and 24.8 for male and female, respectively in 1990. But it has increased to 29.3 and 26.5 in 2000, and 31.8 and 28.9 in 2010. Consequently, the proportion of single has sharply risen for late 20s and early 30s. The recent 2010 census revealed that 69.3% of female aged 25-29 were single while it was 29.1% for aged 30-34.

The main purpose of this paper is to examine determinants of nuptiality changes in Korea. The paper will first analyze factors affecting nuptiality, such as education level, economic activity, and place of residence; and second trace changes in nuptiality pattern for the period of 2000 - 2010. The main source of data for this analyses come from the row data of 2000 and 2010 population census.

Then using the recent survey data, reasons for not married are also examined in detail by major characteristics of the respondents. Based on the result of both analyses, the paper will suggest policy measures for increasing fertility in the future.

P1309

Regional Variation of Household Size and Composition in India

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Anticipating changes in the number, size and composition of households are an important element of many issues of social concern. To fulfil the objectives, three rounds of National Family Health Survey conducted in 1992-1993, 1998-1999 and 2005-2006 have been used. Over the time period there has been decline in the household size from 1992-1993 to 2005-2006. Different dimensions of household size and composition have been studied by considering size of the household, age composition, members' relationship to head, household complexity, sex of head and household structure as well as association between household size and structure. The second part of the paper depicts that household size is lower in urban areas than in rural areas. Eventually it can be stated that number of children in the household has negative relation whereas number of adults in the household has positive relation with the wealth quintiles.

P1310

Mother-in-Laws Influence on Fertility Behaviour of Daughter-In-Laws: Evidence from Rural Bihar, India

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Extant literatures from developed countries have demonstrated effects of parents on their children's childbearing preferences and behaviour. In general, such effect is channelized through parents own fertility behaviour or preferences for their children. This intergenerational transmission of fertility behaviour is well justified across pair of generations - mother vs. daughter/son, father vs. daughter/son, and grandfather/mother vs. grandson/daughter - in developed countries. But such evidence is meagre in developing countries possibly because of lack of information across the generations. But one can expect such relationship among developing countries too. In India, where family plays important role in shaping the socio-economic and moral life of an individual, it may be auspicious that older family members has greater influence on different facet of decision making of younger family members. Evidence shows that mother-in-law plays an important role to channelize the diverging norms, interests and decision to daughter-in-law within the Indian family system. Moreover, mother-in-law have greater influence on the autonomy of daughter-in-law regarding decision on health seeking behaviour. Thus one can expect the influence of mother-in-law on the fertility behaviour of daughter-in-law which is an uncovered area in the Indian demographic literature.

Accordingly, this study examines the influence of mother-in-law on the fertility behaviour of daughter-in-law. Three indicators of fertility behaviour such as - use of family planning, desire for more children, and preference for a son child - are used in the study. Keeping this three core issues we have examined the influence of mother in law. The study is conducted in the rural area of Bihar (a province of India). Primary data is used in the study which is collected from the selected district of Bihar during March-May, 2010. Data is collected through three semi-structured schedule namely - household schedule, daughter-in-law schedule, and mother-in-law schedule.

Bivariate and multivariate analysis is carried out to understand the process. In multivariate analysis Binary Logistic Regression and Ordinary Least Squares (OLS) estimates is used considering the nature of dependent variables. Coomb's scale is used to measure the desire for children.

Findings report influence of mothers-in-law on the fertility behaviour of daughter-in-law in rural Bihar. Mothers-in-law were likely to influence the number of children their daughters-in-law had and the timing of their daughters-in-law being sterilized, but they did not seem to have influence with regard to decisions on the use of modern contraceptive methods, which were mainly being made by young couples themselves. Mothers-in-law showed a very strong preference for son from their daughter-in-law than the daughters-in-law's own preference. Findings of the study suggest that mothers-in-law should be included in Information-Education-Communication (IEC) campaigns about family planning.

P1311

Waiting to Wed, Rushing to Birth: Who is Driving Trends in the Timing of Marriage and First Birth?

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In many countries throughout Asia, women are marrying later and the duration to their first marital birth is declining. These are not independent trends: age at marriage is a key factor affecting timing of the first birth. Yet, variation in the first birth interval is only loosely explained by marriage timing. Using DHS data from six countries (Bangladesh, India, Nepal and Indonesia, the Philippines, and Vietnam), this study investigates the socio-demographic composition of both trends to elucidate the relationship between them and to try to account for variation in this relationship across countries. Specifically, it asks:

- Within each country, are these trends universal or concentrated in selected segments of the population?
- Are those subgroups delaying marriage the same as those with shortened birth intervals?
- Do these population subgroups differ by country?

The study examines the bivariate associations of age at marriage and first birth interval with: education, socio-economic status, religion, ethnicity, urban/rural residence, and region. Multivariate models identify socio-demographic determinants of later marriage and shorter birth intervals, the latter using a Heckman's model to control for selection into marriage.

P1312

Marriage Choice and Length to First Birth Interval in India

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Concomitant with a fertility decline, Indian cultural institutions like marriage are experiencing a transition from traditional arranged marriages to love marriages. This study examines the impact of increased female autonomy in partner choice on the length to first birth, using data from the nationally representative India Human Development Survey (2005) with a total sample size of 23,754 women with at least one birth. The first birth interval is defined as the length of time between marriage and the birth of the first child. In societies such as India where childbearing contributes significantly to a woman's social identity, a first birth proves her fertility and reduces the anxiety surrounding family continuance. A dichotomous variable is then created with births occurring within 24 months of marriage coded as 0 (44.69%), and those thereafter as 1 (55.31%). In this analysis, respondents are asked, "Who chose your husband". Answers are coded as 1 (4.72%) if respondent chose for herself (love marriage), 2 (36.84%), if it was a joint decision with her parents (joint marriage) and 3 (58.44%) if she had no say in the decision (arranged marriage). First, Kaplan-Meier survivor estimates of the proportion of respondents who do not have the event of a first birth by duration of marriage at month *t* are examined using survival analysis. By the end of the first year of marriage, 18% of women in love marriages have had a first birth, compared to 15% of women in joint and 12% of women in arranged marriages. By the end of the second year of marriage, women in arranged marriages have significantly higher proportions of births: 53% have had a first birth compared to 46% of women in joint and a lower 40% in arranged marriage. Second, analysis by birth cohort (1956-1980) reveals the overall decreasing trend in length to first birth intervals by marriage, as well as the sustained delay in age at marriage and the "catching-up" of births among women in recent birth cohorts. Finally, logistic regression results indicate that women in arranged marriages have longer birth intervals, with a mean of 41 months, while those in love marriages have a significantly shorter interval, at 33 months. These findings are explained by increasing female age at marriage, increasing female education, urban residence, spouse being from a different village, and longer length of familiarity with spouse prior to marriage. All the results stated above provide insight into newer determinants of fertility from the traditionally known proximate determinants of fertility described by Bongaarts (1978), especially in a South Asian setting where marriages are socially determined.

P1313

Age at First Marriage and Effective Marriage; Level, Trends and Determinant: An Analysis of NFHS-data

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Study of age at marriage, has been an important part of demographic and economic analysis. It is well known that population growth depends primarily on two factors, fertility and mortality, and fertility in its turn depends considerably on the age at which men and women marry. Fertility pattern of a country depends upon the effective age at marriage. In India, there exists a long established custom to enter into effective marriage several years after marriage in many places. This is called “Gauna” (Effective marriage). The Gauna system prevails primarily in communities where age at first marriage is very low. The time difference in age at first marriage and effective marriage varies over different places. Therefore the broad objective of the study is to trace the trends in age at first marriage by birth cohort and marriage cohort in India and selected states and to study the prevalence of practice of Gauna and trends in duration between age at first marriage and age at Gauna.

For the present study we have used all three rounds of National Family Health Survey (NFHS). For the present study we have selected the state Rajasthan and Andhra Pradesh because both the states have substantially low age at marriage and also they belong to different regions of India. To capture the effects of potential socio-economic variables on age at first marriage as well as age at effective marriage Bi-variate and multivariate techniques are used.

According to NFHS-1 there were more than three percent ever married women in age group 10-14 but it has been declined up to two percent during NFHS-3. In Rajasthan this proportion in early ages of 10-14 is still very high (more than 10 percent) implying low age at marriage and not much changing from NFHS-1 to NFHS-3. Very small number of females getting married below age 10 in all birth cohorts in India as well as in Rajasthan and Andhra Pradesh. Also finding indicates that gap between age at first marriage and age at Gauna is decreasing over the three surveys in India and selected states. More than 50 percent women start living with her husband by age 15-19; there are very few females for whom age at gauna is after age 30. Findings indicate that in India and Andhra Pradesh age at marriage has been increased enough but in Rajasthan situation is not much going to change over the three surveys. Rajasthan is the only state where the practice of gauna is wide spread and the difference in age at first marriage and effective marriage is still high**.** At national level and in Andhra Pradesh the gap between age at first marriage and effective has become negligible.

P1315

Extramarital Births and Premarital Conception in Hong Kong SAR

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In much of the western world, where the normative power of marriage as a ‘key' to childbearing has waned significantly and co-habitation has become accepted, premarital conception as a liminal field of study has been largely neglected. However, in East Asia, where childbearing within marriage is still very much the norm and extramarital births are rarer, premarital conception is an important ‘grey area' where significant changes can tell us much about societal- and individual-level changes regarding attitudes towards marriage. In this poster, we analyse new data from the Hong Kong Birth Registers and find a significant increase in both the number of extramarital births and premarital conceptions - which account for 29% of all first births in the territory. Preliminary analysis suggests important differences within individual societal groups. This finding forces us to re-evaluate our understanding of the marriage system in Hong Kong and asks new questions about changing gender roles and sexual attitudes.

P1316

Who Enter Unstable Marriage in Japan?

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Marriage is generally believed to be the way to financial, physical, and emotional security. However, unstable marriage, in reversal, would lead to negative results for family members through couple's conflict or divorce. In this paper, we demonstrate that who stay single, live in stable marriage and experience unstable marriage, and identify variables associated with the risk of unstable marriage. We use data from the nationally representative survey on Japanese marriage and fertility conducted in the 2000s and stableness of marriage is identified considering the respondent's marital status and husband's income. When we define experiencing unstable marriage as being ever-divorced or ever-widowed or first-married women whose husband's income are less than the half of the median among the same age group, while 60 percent of women in their forties get into the category of stable marriage, 28 percent fall into the category of unstable one. Descriptive statistics show that educational attainment and status of first job are negatively associated with the proportion of experiencing unstable marriage for both men and women. The association of these variables as well as premarital pregnancy with the risk of experiencing unstable marriage is examined by estimating competing risk model on marriage timing. We discuss implications for the social policies on increasing single-parent families.

P1317

Violence within Marital Life among Youth: Evidence from India

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Violence within marriage is not uncommon in India. Mainly husband perpetrates physical and sexual violence on wife. However, not much is known about the predictors of such violence from married men and women's perspective separately. This study examines the extent and predictors of physical and sexual violence among married men and women in India and its selected states.

Data for this study is taken from "Youth in India: Situation and Needs Study" which is conducted during 2006-07. The study is conducted in six selected states of India in such a way that it reflects the national scenario. The survey is outcome of collaborative efforts of International Institute for Population Sciences (IIPS), Mumbai and Population Council (PC), New Delhi. To fulfil the purpose of objective cross tabulation and binary logistic regression were used.

Results show that about one fourth of married men perpetrated physical violence and the similar proportion of women were experienced the same form of violence. One in three young women reported about coercive sex perpetrated by husband. The result reveals that married men with higher age at marriage, residing in non-nuclear family and in urban areas, with better economic condition are less likely to perpetrate physical violence. Consumption of drug and alcohol, extra marital relation, and witnessing own violence at childhood also enhance the chance of physical violence in marital life. Interestingly, men who have witnessed parental violence in childhood are less likely to commit both physical and sexual violence. North- South regional variation is also distinct, yet in opposite direction for two selected types of violence. Experience of physical violence is more in the south while for sexual violence it is the other way round. Love marriage perpetrates more violence while non payment of dowry enhances the chances of less violence among youth.

P1318

Matching Characteristics of the Spouse and how it Correlates with Mental Health

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Indonesia is a large multi cultural country. Development of transportation infrastructure, social, education and economic opportunities encourage people to move not only in the same sub district or regency or province but also moves cross provinces. Younger generation are now more exposed with more heterogenic population not only in education but also in ethnic and religion. It is expected that inter marriage between individuals with different ethnic, religion or education level will be more in the younger cohort than the older cohort. Will this different background affect their psychological well being? Using the Indonesia Family Live Survey (IFLS), this paper will explore the level of matching of the ethnic, religion, education and age of spouses and family background of three cohorts: born before 1962, born 1962-1976 and born after 1976. The paper will also examine the correlation of the matching of the characteristic of the spouse with mental health condition of the person.

IFLS is an ongoing longitudinal survey since 1993. The survey sample represented about 83% of the Indonesian population living in 13 of the country's 26 provinces. The study uses the IFLS4 data which collected in 2007. IFLS is a general purpose survey designed to provide data for studying many different behaviors and outcomes. The survey contains a wealth of information collected at the individual, household and community levels, including indicators of economic and non-economic well-being. In particular, for this paper, IFLS 2007 collects an array of information on married history, health, migration and basic characteristic of individual including religion, ethnic, education and age.
The descriptive statistics and multivariate regression will be used to explore matching characteristic and family background of the spouse and its correlation with mental health controlling for social condition of the individual, household and community.

The preliminary results indicate that there has been increased in percentage people married with different ethnic background in younger cohort. Cohort born before 1962, who married with different ethnic group only 8% but for those who were born after 1976 the percentage almost doubles. Marriage of different religion in Indonesia is very small, the percentage is less than 1% and has not changed over time. The percentage of spouse with different education of young cohort is higher compared to the older cohort, while the age different between the spouse of young cohort (40%) is less than the older cohort which reaches 64%. The different characteristic of family background between spouse is more popular in younger cohort. Correlation with mental health shows that married with different ethnic or education background have lower mental health condition then those who have matching characteristics

P1319

A Decomposition Analysis of Changing Living Arrangement for Elderly in India, 1992-2006

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It is perceived that co-residence system of living arrangement is undergoing rapid transition towards nuclear households under the changing family size and socio-economic scenarios. Present study makes an attempt to unearth the changing pattern of living arrangement of elderly and explores the socio-demographic and compositional factors contributing to this. Using information on age, sex, relationship to the head, household structure and living arrangement is being calculated from the three rounds of Demographic Health Surveys. Percentage of nuclear household has increased from 55.7 in 1992-03 to 64.9 in 2005-06. Rural area has shown higher increase in nuclear households than urban. Percent of elderly living alone has increased from 8.9 to 18.1 during the same period. Elderly living in rural area, not having agricultural land, lower affluent level, educated, belonging to Schedule Tribe caste and from southern region of India are more likely to live in vulnerable status i.e. alone or with wife only. Wealth is the most driving factor to change in living arrangement for elderly followed by regions, landholding and caste.

Key words: Living arrangement, elderly, nuclear family, decomposition

P1320

The Analysis of Transition Time from Religious to Civil Marriage in Turkey - The Evidence from Tdhs-1998 and Tdhs-2008

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The Turkish civil code clearly describes the age rules for marriage. The first Turkish Civil Code which entered into force in 1926 asserted that men could marry at age eighteen and women could marry at age seventeen. For extraordinary cases the age limit was pulled back to age fifteen for both sexes (Civil Code 1926). After the last renewal of the Turkish civil code in 2002 men and women are strictly forbidden to get married before age sixteen. Article 124 of the Turkish Civil Code which entered into force in 2002 asserts that, *'Men and women cannot get married before seventeen years old. Only in extraordinary situations and with a very important reason may the judge can let this marriage happen for those who are sixteen years old.'*

In Turkey besides civil marriage religious marriage is a common tradition shared by most of the population. Religious marriage is also legally recognized by the law. But the civil code doesn't allow religious marriage before civil marriage. According to the article 143 of the civil code a religious ceremony cannot take place without presenting the civil marriage certificate. Although it's not legal to conduct religious marriage before civil marriage, it's a common practice. Despite the strictly forbidding law some religious marriages take place before civil marriage. In some cases religious marriage is the only practice and civil marriage never happens. But in most of the cases sooner or later religious marriages are succeeded by civil marriage.

This study which uses data from Turkey Demographic Health Surveys of 1998 and 2008 analyzes the duration of transition from religious to civil marriage. Since this analysis regards transition from religious marriage to civil marriage the units to be analyzed will be the ever married women who have started their marriages with a religious ceremony.

It was found that starting a marriage with religious marriage is more common among women without education, among Kurdish speaking women and among women in poorer households. These gorups were also found to be resistant to transition from religious to civil marriage.

P1402

Life Course Perspective of Women's Status and Autonomy in Two Different Religious Region– Comparative Insight from West Bengal and Bangladesh

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Understanding women's status of a homogeneous cultural space with religious difference is a challenging task. The paper is an attempt to study the life course perspective of women's status and autonomy in three regions namely, West Bengal, Bordering region of Bangladesh and Rest of Bangladesh. Here we tried to test whether status (autonomy) of women of these three regions differs by age, religion and region using four sets of large scale data i.e**.** NFHS 1998-99, NFHS 2005-06 and DHS-Bangladesh 2000 and 2004.

Bivariate and multivariate analyses are applied and curves are being fitted to study the age – autonomy relationship. Women's autonomy moves up with age up to mid 40s after which it decreases in all three regions, supporting a best fit of quadratic polynomial model.

$Y= f(x) = a_o+ a_1x + a_2 x^2+\ldots\ldots\ldots+ a_n x^n$,
Where, x = age group, y = Mean score of WEI, a_o = the constant, a_i = the coefficient of x^i (i = 1, 2, 3…., n).

OLS regression is used to see the determinants of women's autonomy in three regions and also to see the effect of religion and region on children ever born. Logistic regression describes the relationship between a dichotomous response variable and a set of explanatory variables which is undertaken to see the effect of religion and region over the direct indicators of women's status at varying levels. The covariates are controlled in the regression analysis are- age, age squared (for predicting CEB) place of residence, household size, sons and daughters at home, household head, standard of living, education, work status, mass media exposure, number of living children, age, educational difference, religion and region.

There is an upward trend in the mean score of women's autonomy index (WAI) in-betweens age 15-44 that is women who are under 20 years of age are less independent than the women who are in 40-44 age groups. Older women have more independence and autonomy than younger women because they have more experience with life and the model of WAI score at all three regions follow a quadratic polynomial model. The predictors of women's autonomy support the hypothesis that in the north Indian subcontinent determinants of women's autonomy are of similar nature. Religion does play an important role within nation. Muslims are having more autonomy over Hindus in Bangladesh while it is the other way round in West Bengal. In individual decision making, West Bengal is far better than Bangladesh while in household level decision making it is the other way round. In spatial mobility both regions of Bangladesh are in an advantageous position when it comes to visit to known places or people while for visiting unknown place or people, West Bengal supersedes Bangladesh.

P1502

Gender Disparities in Primary Education across Siblings in India: Is Intra Household Disparity Higher in Regions with Low Child Sex Ratios?

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The strong son preference observed in South Asian countries has led to practices like sex selective abortion and infanticide (either directly, or through neglect). This has led to a decline in child sex ratio. In India, for instance, the number of females per 1000 males (in the age group 0-6 years) has fallen from 927 (2001 Census) to 914 girls per 1000 boys (2011 Census). But what happens to the surviving girls as they grow older? Does the discriminatory attitude of parents towards daughters persist, leading to discrimination in spheres like education? The answer to this question is important in view of the empowering effects of education and the significant spillover effects not only on the present generation but also in the future, with mothers playing an important role in the education of children. While researchers often theorize that differential treatments by parents, based on the gender of their children, play a role in the considerable differences in educational outcomes observed in developing countries, attempts to directly examine whether educational outcomes of siblings from the same family vary are rare. This paper asks the question: Do parents tend to educate sons more than daughters? We consider children aged 12- 18 years and education level up to the primary level only due to constraints imposed by the data set.

The paper uses unit level National Sample Survey Organization data for the 61st Round (2004-2005). Information on individual educational attainments is used to estimate mean educational levels attained by sons and daughters in each family. The gap between mean educational levels of siblings is calculated for all families having both sons and daughters to construct two household level disparity scores. The paper hypothesizes that the intra-household disparity scores are higher in areas where child sex ratios are low. This is supplemented by an econometric analysis based on an ordered logit model which regresses disparity scores on child sex ratio of the region and household characteristics like economic status, education, gender and occupation of family head, place of residence, etc. Findings indicate that disparity scores are paradoxically lower in areas where sex ratio is low. This indicates that sibling discrimination in the sphere of education is less in regions with a tradition of sex selection.

The paper concludes that parental attitude towards education and practices may be more complicated and less uniformly negative than commonly portrayed. However, it is necessary to refine the study methodologically and extend it to higher levels of education.

P1503

"Gender Perspective and Son Preference in India: A Critical Analysis"

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Gender composition reflects socio-economic development, cultural traditions, gender-specific mortality differentials and gender-specific migration character of a given population of a particular country or region. Gender structure or sex ratio is one of the most important characteristic of a population as it reflects on above enumerated and other aspects of region or nation. The purpose of this paper is to analyse son preference in India from the gender perspective and its consequences in terms of gender equality, social justice and female status in the society. Sex ratio is good measure of gender discrimination in all walks of life. In India, son preference is reflected right from ages 0-6 years whereby male children dominate the sex ratio. Male domination and gender inequality in economic sphere are reflected in the fact that female work participation is much lower rather negligible in India consequent upon low economic empowerment and therefore their low status in the society. Their lower status in the household and in the society and their low participation in social and political activities is reflected in their lower enrolment in educational institutions and very low level of their literacy even in urban centers.

*Key words**:** gender, sex ratio, son preference, female work participation rate (FWPR), literacy.*

P1505

Cost of Violence Against Women in Bangladesh

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Violence against women (VAW) is both a crime and curse in the society. The aim of this paper is to determine the social and economic cost of VAW to individuals, families, communities, and the state, and the cost to development agendas.The study was conducted through both quantitative household surveys: 481 interviews with adult males and females and adolescents (boys and girls) and qualitative in depth investigations from January 2010 and through June 2010. Tortures on women or violence against women are broadly categorized in four groups: Severe Physical tortures (20%:beaten by sticks, acid throw, tortured by heated/burning rod, rape, strangulation, murder, arson); Mild Physical tortures (25%: slaps, pushing, hair pulling, deny in adequate food); Mental Tortures (75%:scolding, rebuking, neglecting); and 28% Financial (denying financial support) or Social tortures (threats of separations/desertions, divorce, coerced early marriage). According to the estimation of the sample populations, 45% of the women have been identified as victims of physical tortures and 75% of the women have been identified as victims of mental tortures at any time. Social tortures are somewhat comparable with the mental tortures. More than half of the respondents (57%) perceived family level conflicts arising out of issues related to child care, preparing food, family income and sales of family assets etc. The next factors mentioned are issues related to dowry (18%), followed by the factors caused due to wives' disobedience or difference of opinions (16%). The rest of the issues are related to extramarital relations (4%), infertility (3%), and provocations by the mother in law (2%). Victims suffer variegated losses as cost of violence. **Physical losses, Mental losses , Social Losses** and **Financial Losses.** Mean costs in Taka incurred by the victims (estimated by the respondents) for obtaining justice and for recovery of health is Taka 2954 (approx. 45 USD) in the study areas. The costs incurred due to tortures are highest among the non poor, followed by costs incurred by the extreme poor. Estimates on the time (in days) required to settle (either obtaining justice or resolving without partial or no solutions) the issues of violence at post tortures period was on average 83 days or nearly three months. Findings revealed that attitudinally the stakeholders, such as victims, perpetrators, household respondents, salishkars, and the community groups (influential/change agents) are unequivocally denounced tortures/violence against women. Victims demanded access to justice by increased orientation of the local administration, influential and also considering enrollment of women as judges at different levels including at the Salish level. Adolescents still think that in laws (grand parents) weigh much influence in the family (empowerment); hence any communication with them may be effective, if it is planned through influences of grand parents.

P1506

Economic Analysis of Family Decision-making in Sex-selection in Rural China

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China's sex ratio at birth (SRB) is increasing rapidly which has rarely been seen in the world in the latest 30 years. During this period, China has experienced the most rapid economic development and the most profound social transformation in its history. In this case, what is the most important factor that influences people to do Sex-selection? Is there any relationship between China's SRB growth and economic growth? The core purpose of this paper is to analyze sex-selection in rural China from the economic angle of family decision-making theory. Sex-selection is one kind of family decision which is neglected in western family decision theory because there is no practice of Sex-selection in the western world. Cost and utility are two important factors affecting the family reproductive decision in western family decision theory. However, the cost and utility analysis is not sufficient to explain the sex-decision problem in rural China. As the cost has to be paid immediately and the utility can return only after many years, the real consideration in decision-making should be the child's expected utility to Chinese farmers who can only have bounded rationality. By using prospect theory to analyze the reproductive decision-making process, we find that the expected utility is a determinant in sex-decision-making in rural China. Using data from the sampling survey done by Renmin University of China in 2010, this paper presents a quantitative analysis of women's expectation of children and gender differences in rural China from the perspective of financial support, elderly care and culture, and analyzed the relationship between the different gender based expectation and the strong gender preference. The conclusions are: The pension expectation of women on children is very low in financial support and living together because of economic development, social development and population floating, but are still high in elderly care, maintenance responsibilities and continuation of the family line; People's expectations of boys and girls have different emphases, still reflecting the traditional gender cognition; The correlation between the people's expectations and preference towards children of different gender is significantly positive, particularly in the aspects of expectation of elderly care, maintenance responsibilities and continuation of the family line; financial support is no longer the important reason of gender preference. The world's most populous country, China has the most serious imbalance in sex ratio at birth. In this condition, economic analysis of rural Chinese women's gender preference will enrich and improve western family decision theory, and provide a theoretical basis for other countries to prevent, relieve and manage the problem of sex ratio at birth.

P1508

Socio-Economic Norms in Conflict Areas Links to Women Development

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Ethnic Conflicts after the collapse of Indonesian New Order have impacted to women groups left behind on development compared to the other groups. This paper will examine the main factors, particularly social, economic and norms associated to ethnic and religions of women development progress in the conflict regions namely the Province of Aceh and Maluku. This is based on qualitative research in both provinces and also supported by quantitative macro datasets, population censuses which are derived from BPS Statistics Indonesia (2000-2010).

Ethnicity and religions have influenced the escalation of conflicts in Indonesia. Varieties of ethnic and religious groups in the Province of Maluku have instigated conflict since 1999. Migrant Muslims which comprise Butonese (10.59 %), Javanese (4.56%), Buginese (0.91 %) compared to Kei (10.97 %) land Ambon (10.53 %) indigenous Christians have instigated conflicts. It is the same with the Province of Aceh, where Acehnese ethnic groups are only 50.32 %and the rests are fifteen different ethnic groups like Javanese, Sundanese and Madurese. Women in the post conflict regions got married with local women. However many of men left women after the end of conflict and war. Women struggled to be independent or to be single parents after their husbands joined the paramilitary groups. For example, Aceh Freedom Movement (GAM) members who returned home after the Helsinki Peace Agreement have made new problem for the women. They used to protect their own family by working without supports of their husbands who joined GAM. The authority of the women was later controlled by GAM returnees. This has created violence against women.

P1509

China’s One-Child Generation: Intra-Household Gender Equality and Son Preference Attitudes

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Gender discrimination and son preference are key demographic features of East Asia and are well documented for China. Over the past few decades, piles of research papers has been devoted to China's demographic manifestations and demographic impacts of son preference; however, not enough attention has been paid to provide insights into the roles of extra-household and intra-household gender inequality as causes of son preference in this country. There is a growing recognition that sex-selective reproductive behavior is strongly conditioned by the degree of gender equality in a culture, especially the connection between perpetuating son bias and societal gender inequalities. Inequality between men and women is a matter of society at large, but it begins in the family. This paper, as a consequence, aims to provide a new perspective and an in-depth analysis on the relationship between intra-household gender equality and son preference attitudes in the contemporary Chinese family.

Specifically speaking, this paper will firstly explore the current situation of (1) intra-household gender roles and (2) intra-household gender relations. (1) From a social constructionist view, family division of labor is strongly influenced by societal expectations about what it meant to be a man or a woman. In Chinese families, traditionally, household chores and childcare responsibilities are placed on shoulders of women in spite of high-rate of women's full-time employment outside home. (2) In the meantime, gender relations involve differences in power, both "power to" and "power over". In general, wives in traditional Chinese families perceive subordination to husbands and women are often excluded from making crucial household decisions, including major household expenditures, their visits with relatives or friends outside the home, and reproductive health issues. Although in recent years, transition towards greater gender equality in relation to both gender roles and gender relations is taking place, as well a significant shift away from the social norm of "male breadwinner/ female caregiver model" among young generation.

We therefore hypothesize that son preference attitudes are positively correlated with degrees of gender equality between spouses in the family. Families showing a strong male predominance tend to have strong son preference, while son preference is not evident when couples share an egalitarian division of household labor and an equal gender relation. Changes towards egalitarian spouse roles and relationship can bring positive outcomes in eliminating son preference attitudes. To examine the validity of these hypotheses, the author uses empirical fieldwork data collected through conducting a questionnaire in Shanghai with both local young couples formed of single children and rural immigrants grew up within multi-child families. Results show a higher intra-household gender equality and weaker son preference among the formers, as women in one-child households enjoyed significantly improved opportunities for education compared to children inside multiple-child households.

P1512

Developing and Evaluating Community Interventions for Gender Norm Change and Sexual Risk Reduction in an Urban Community in Mumbai, India

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Interventions are likely to have greater impact and sustainability when supported by peers and opinion leaders and adapted to the social, cultural and politico-economic context.

This paper reports on community intervention focused on gender equity and sexual risk reduction that is a component of a multilevel, US National Institutes of Health project involving the prevention of HIV/STI transmission from husband to wife in a low income, primarily Muslim community of 500,000 people in Mumbai.

To design the interventions and develop an instrument to assess gender norms, formative research was conducted (2008-2009) that included in-depth interviews with NGO staff, religious leaders, service providers, married men and women, couples and leaders in the community. These data were analyzed and formed the basis for community intervention that included collaboration with five NGOs and the religious sector (Imams). Capacity building workshops were organized for these key stake holders in which messages were developed jointly that emphasized the importance of marital communication, women's health, spousal violence and reducing sexual risk. These messages were spread in the community through special community level events.

The data also yielded a series of 83 normative statements related to gender, sexuality and relationships. Using principal components analysis and Cronback's alpha, a Gender Equity Scale (GES) was formulated consisting of 29 items. The GES was administered in 2009 to a baseline random sample of 601 community men and women, a control group of 150 and a 24 NGO staff, 56 service providers (community volunteers) and 48 Imams. Follow-up surveys were administered to new random samples of in the study community and control community in 2010 and again in 2011.

The results showed that at baseline, the mean scores (on a four point Likert-type scale) for the study and control communities showed no significant difference and were on the inequitable side, consistent with the views of the Imams. NGO staff showed the most gender equitable scores. In the first follow-up GES instrument administration (2010) after the initiation of the community interventions, there was an overall significant positive change in the gender attitudes of the study community, with men showing the most significant change as well as a significant improvement in gender equitable attitudes among both NGO staff and Imams. In the second follow-up the same trajectory was observed with significant differences from baseline to first follow-up and first follow-up to second follow-up for the study as compared to the control community and among the special subpopulations.

Discussion of these results will focus on the ways in which the formative, qualitative research contributed to the development of the community intervention and generated a methodology that can be utilized to assess the impact of intervention on normative change for any community.

P1514

Gender Disparity in Health and Food Expenditure in India among Elderly

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Most of India's elderly are economically dependent and the cost of treatment is often a burden on the household. However, habits and social customs are not same in all the parts of India as gender discrimination is a major concern in the country. The present paper aims to access the gender disparity in health and food expenditure among elderly using Consumer Expenditure data collected in various rounds by National Sample Survey Organization (1999-2000 and 2007-08). Also the paper examines whether the change in the sex composition of elderly contributes to the change in health and food expenditure from the first survey period to the second survey period. Linear regression analysis is used to fulfil the first objective and to obtain the second objective Decomposition analysis is employed. Findings indicate that though the health expenditure on elderly women has increased from the first to the second survey period, but in both the survey period the elderly women are less privileged compared to males; and there is a huge disparity between elderly men and women in getting health care facilities and food expenditure. Result from Decomposition analysis reveals that compositional shift in sex among elderly is the main factor which contribute to increase in health and food expenditure from the first survey period to the second survey period. The study suggests that looking towards the increase in expenditure from the first to the second survey period and the gender disparity in expenditure among elderly in households, Government should implement programmes addressing old age security and emphasize should be given on elderly women.

P1515

Son Preference and Contraceptive Use in Madhya Pradesh: An Empirical Evidence from NFHS-III.

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A strong preference for sons may be an obstacle to fertility decline if couples continue having children after reaching their overall family-size goal because they are not satisfied with the sex composition of their children. The present study tries to explore the association between son preference and contraceptive use in the state of Madhya Pradesh, where son preference has been consistently higher and the overall fertility level is quite high. The dataset of National Family Health Survey (NFHS-III) 2005-2006 has been used for the present study. In order to understand the extent of son preference, an index has been computed using information on the sex composition of the ideal number of children. Further, an index called Arnold's index has been computed to measure the influence of son preference on contraceptive use. The study reveals that the main factors affecting contraceptive use are found to be age, number of living children, marital duration, education level, standard of living, mass media exposure and son preference. At each parity, contraceptive acceptance is higher among women, who have one or more living sons and the practice of contraceptive is found to be less among couples with no sons. Acceptance of contraceptive is found to increase monotonically as the number of living sons in the family increased. The Arnold's index depicts that, if gender preferences could be eliminated entirely, contraceptive use would increase by about nine percent. An increase of this magnitude would have a substantial impact on the population growth rate of the state.

P1517

Gender Equity Movement in Schools - Engaging Young Students in Critical Discussion and Self-Reflection to Challenge Inequitable Gender Norms and Enhance Their Sexual Health

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Inequitable gender norms are underlying factors for both adverse health outcomes and gender-based violence. These norms shape expectations regarding individual behaviors of men and women, as well as the interactions between and among them and set-in early through various socialization processes. The recent impetus on work with young age groups is driven by the recognition that these fundamental construct must be challenged at ages when they are being constructed. Schools are uniquely placed to influence and shape children's thought processes; however, more often than not schools reinforce gender stereotypes and perpetuate patterns of violence.

This paper aims to describe attitude of boys and girls on gender, sexuality and violence and approaches to engaging students in dialogue and critical reflection around these issue; and provide evidence of shift in their perception and self-efficacy related to SRH. It uses experience and results from an operations research project - Gender Equity Movement in Schools - implemented with around 8000 students of grades VI and VII ages 12-14 years. This project used quasi-experimental design and carried out in 45 randomly selected schools in Mumbai over two academic years (2008-2010). Intervention included group education activities to engage students in self-reflective, introspective discourse to question inequitable norms and use of violence, and campaigns to initiate public dialogue and create a non-threatening environment to discuss these issues within schools.

In order to test the effectiveness of the intervention, longitudinal data were collected at three time points - 2035 students participated in first two rounds, while 754 students participated in all three rounds. A scale was developed to measure gender attitude and shift overtime.

Multivariate analysis showed that boys and girls from intervention schools are more likely to have high equitable attitude; support higher education for girls and delayed age at married; and oppose violence within relationship, compared to control group. On specific items around sexuality, such as, "*Girls provoke boys with short dresses*," while there was increase in proportion of students who disagreed with this statement in intervention schools (girls - 43% to 52%; boys - 27% to 35%), there was no or negative change in control. Time series analysis indicated that with time children are more likely to get stereotypical message around gender and sexuality unless intervened early and systematically. The intervention also helped in building their confidence to protest and register complaints to unwanted sexual advances and made them more comfortable with students of opposite sex.

The indicators on perception and self-efficacy around gender, sexuality and violence are important and necessary precursors for better SRH and equitable relationships, and that intervention to promote positive SRH outcomes among adolescent should include gender-transformative approach and school could be a potential site for this.

P1518

Son Preference and Governance of Sex Ratio at Birth in China

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China's Sex Ratio at Birth (118.06 for 2010) has been beyond normal range for 30 years while the Chinese governance which is from policy to law has gone through 24 years. However, the skewed SRB leaves us some doubts about effectiveness of the SRB's governance. In this paper, we use a quantitative model to directly measure effect of the cultural governance to prove what the Chinese government makes great effort changing cultural preference is justified. The SRB is still hovering in the high while the TFR is below the reasonable replacement level. We also predict how fertility decline and son preference at different levels will affect value and duration of the SRB respectively. We firstly cite a quantitative model given by Li et al, defining 3 key indices as sex selective situation, sex selection pressure and son preference potency. In a population with a strong preference for son, significant fertility decline is often accompanied by a considerable increase in the population's SRB. We decompose the force that increases SRB into two components; the first is the fertility decline, which causes an increase in the sex-selection pressure, and the second is son-preference potency as determined by the cultural background of the population. Next, we estimate the number of women who are in the sex-selective situation and how many of them will finally use sex-selective method from all the previous census data and part sampling data. The result shows that the implementation of the family planning policy significantly decreased the TFR, leading SRB to increase; when the TFR stops changing or at a low level, the son preference potency will play a more important role. Initiated by scholars and institutions, "Improving girls' living environment project "and "caring for girl campaign" are representatives of China's governance practice. Based on the above actions, the momentum of the increasing SRB at high level is subject to containment to some degree. From all the analysis, we can lay the fundamental basis of the governance, directly measure the effect of the cultural governance and evaluate the achievement and deficiency of the past work. According to estimated results, son preference potency, which can be seen as an indicator of achievement of cultural governance, decreases from 17% in 1989 to 13% in 2000, and 11% in 2010. We can conclude that the current high SRB is mainly caused by extremely low TFR and what the Chinese government doing to curb strong preference is effective. Finally, we design several cases predicting how the fertility decline and son preference at different levels will affect the value and duration of the SRB. Thus, useful policy recommendations for the future work can be obtained.

P1520

Factors Associated with Contraception-Use Decision among Married and Cohabiting Women

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Gender is the social construction of attributes based on the sexes. Those perceived differences are forged with reference to the other. With this in perspective, dominance is attributed to the masculinity of males; and subordination tends to be for the femininity of females.

What will be the focus of this study is based on the issue of political subordination in the private sphere of the household. The extent of the capacity of women currently in unions to make decisions for the household is described. The relation of decision-making capacity and contraception use is analysed together with other socio-demographic factors. The analysis will be between women who are cohabiting with their partners and those who are married using the National Demographic and Health Survey 2008.

There is an apparent difference between women who are formally married and those who are cohabiting with their partners. For married women, household decision autonomy is a factor that is associated with the increase in contraception-use autonomy. What this leads to is that socio-economic decision making for women who are formally married is related to the other type of capacity. This is different from women cohabiting with their partners. There was no association found with any of the factors. Women may be in a dilemma regarding the difference in their situation with married women and they may have the perception that they have less power vis-à-vis their partners. What this study entails is that reproduction-related decisions, particularly contraception-use decisions, can be seen as a complex social phenomenon. This is an aspect of couple relation where it is not limited to economic concerns of the household but also the health of women. This is an arena where autonomy of women can be gauged.

P1522

The Effect of Son Preference on Contraceptive Use and Future Intention of Fertility in India and EAG states

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Empowered Action Group (EAG) States (includes Bihar, Jharkhand, Uttar Pradesh, Uttaranchal, Rajasthan, Odisha, Madhya Pradesh and Chhattisgarh) of India are contributing a major chunk to the national population. Although contraceptive prevalence rate is increasing in India but the pace is much slower due to its inadequate increase in EAG states. In these states the CPR for any method is lower and TFR is much above the national figure. Son preference is thought to be a constraint for this. Previous research on son preferences for children reveals in the absence of son preference, contraceptive prevalence rates could be expected to increase and levels of marital fertility could be expected to decline.

So in the above context this paper attempts to study the influence of son preference of women on contraceptive use in EAG states and India. This paper also explores the relationship between the son composition of surviving children and the risk of having a subsequent birth in EAG states and India.

The paper uses the District Level Health Survey (DLHS, 2007-08) data to examine the extent to which son preferences have constrained the success of the family planning programme and inhibited the acceptance of contraception in the different EAG states and India. Son preferences were analyzed by examining the current use of contraception by sex and number of living children. A modified Arnold (1985) Index was applied to this data to estimate the extent to which overall contraceptive use rate and sterilization acceptance would increase in the absence of son preferences in the different EAG states and India. This technique assumes that in the complete absence of son preferences, at any parity, all the couples would behave in a similar manner as those who are most satisfied with their existing sex composition i.e., at the maximum rate within that parity.

Findings indicate that the son preferences have a marked influence on the overall rate of current contraceptive use in EAG states and India. At low parities, contraceptive use increased with the number of sons; however, it stabilized or decreased among those who had at least two sons. It was estimated that if son preference was completely eliminated, contraceptive acceptance would increase by approximately 10 percent and sterilization by 18 percent in the India. Increase of contraceptive use in the absence of son preference in high fertility states like Bihar, Jharkhand and Uttar Pradesh by more than 16 percent point will help to reduce the overall population growth. In all EAG states women who don't have any son, intend to have another child. However, if women are having at least one son then the future intention to have another child reduces drastically.

P1523

Miss Missed or Miss Missing: Reality Behind Child Sex Ratio Decline in Jammu and Kashmir-India

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The 2011 Census figures related to drastic decline in Child Sex Ratio (CSR) in Indian State of Jammu and Kashmir has shocked every conscious citizen. The Child Sex Ratio in the State has declined from a high of 941 in 2001 to 859 in 2011. The State has recorded a decline of 82 points in its CSR which is the highest decline among all the states in India. The most alarming situation is from Kashmir which has recorded a decline of 135 points in comparison to 41 points in Jammu Region. These findings are shocking given the Muslim majority character of the State, illiteracy, poor socio economic development indicators and the conflict. The civil society in Kashmir has not accepted these shocking figures because they think that sex selective abortion is not prevalent in Kashmir. Civil society attributes low child sex ratio in Kashmir to poor Census data quality. The State Health Department also questioned the authenticity of the CSR figures and has ordered for an alternative survey through its network of health facilities to estimate the CSR in the State, though the survey has been completed but the results have not yet been made public. This has again made the topic of child sex ratio in Jammu and Kashmir more confusing.

We use data from various credible sources to analyse the reality behind declining CSR. Preliminary results show that Crude Birth Rate in Jammu and Kashmir has declined from 24 to 18 during the last 10 years but Census-2011 shows that proportion of child population has increased from 13% in 2001 to 16% in 2011. Thus while all other sources show that fertility in the State has declined but Census-2011 shows child women ratio has increased. Besides, there is hardly any discrimination in infant and child mortality by sex in the state. Health Management Information System (HMIS) and Civil Registration System (CRS) in the state during the last three years have shown that the SRB in the State is around 109. The demographic and health surveys also support the view that SRB in the State has not declined much.

Therefore, it appears that there are certain problems with the Census data pertaining to CSR sex ratio. Further analysis show that in Kashmir region child population seems to have been over reported by about 3% and in this process male child and girl child have been over reported differently leading a more skewed child sex ratio.

P1524

Declining Urban Child Sex Ratio in India: A Case Study of Selected States

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The child sex ratio (0 to 6 years) in the country has declined to touch the lowest level since Independence provisional results of Census 2011 have revealed it. Although overall sex ratio has shown an improvement since 1991 but decline in child sex ratio as been unabated since 1961. The child sex ratio has been in free fall since 1961 when it stood at 967. According to the provisional results of 2011 Census it is 914. The Census figures show that in 27 states/Union Territories, the child sex ratio has shown a decline over Census 2001. The only positive here is that Punjab and Haryana, which continue to have among the lowest child sex ratios at 846 and 830 respectively, have improved, up from 798 and 819 during Census 2001. Himachal Pradesh, Gujarat, Tamil Nadu, Mizoram and the Andaman and Nicobar islands are the only other states/UTs that have shown an increase in the child sex ratio. Besides Punjab and Haryana, Uttar Pradesh (899, down from 916), Maharashtra (883, down from 913), Chandigarh (867, down from 845) and J&K (859) have the most worrisome figures. Though the southern states, Kerala (959), Andhra Pradesh (943), Karnataka (943), and Tamil Nadu (946), all have stronger sex ratios when compared to the national average of 914, they are worse off when compared to 2001.

To see the trend (1961-2011) and pattern of decline child sex (0-6) among the Indian states at districts level in India.

· To analyse the data of districts levels as well as rural/urban decline of child sex ratio among the selected states (Punjab, Haryana, Himachal Pradesh and Delhi) at 2001-2011.

Census of India data have been used for writing this paper. Methodologies have been used are Percentage distribution, cross-tabulation, correlation, regression and GIS map.

Despite several policies to protect the girl child their number below six years of age has fallen sharply. Patri-linearity, patri-locality and patriarchal attitudes have resulted in women and girls having subordinate position in the family. Denials of property rights and low paid or under paid jobs have further degraded their position in the society. The immediate cause for the decline in child sex ratio in India is the practice of female feticide. Daughters are perceived as an economic and social burden to family due to several factors such as dowry, the danger to her chastity and worry about getting her married. In such a scenario, the easy accessibility to technology that detects the sex of the unborn child allows families to abort female fetuses.

P1525

Daughter Discrimination and Future Sex Ratio at Birth in India

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The paper endeavours to gauge the trends in asymmetry in sex ratio at birth in India. India is now in a critical juncture when many of its north and western states have already revealed a distorted sex ratio at birth and thus experiencing many social costs; further, in some of the populous states like Uttar Pradesh where fertility is still high is also showing signs of distortion in the ratio. How the sex selection will shape in the larger, demographically less developed states where the pressure of fertility squeeze is yet to begin will be important. It is, therefore, pertinent to examine how the phenomenon is spreading and the path of this trend. Our results based on NFHS III data shows that there is no evidence of a significant increase in sex ratio at either 1^{st} or 2^{nd} birth in any of the major states in India. However, there is clear indication of a rising trend in the ratio in 2^{nd} order birth when the first born is a girl. The contour of gender discrimination in the country- the usual north-west versus south-east divide needs to be relooked. Based on parity progression ratios and building on the recent trend in sex ratio at birth, a further attempt is made to project the level at which the ratio, in the country, is likely to peak. This would be achieved in another 10 to 15 years along with the achievement of replacement level fertility. Sex ratio at 2nd order birth among women who have had a girl at 1st birth is a crucial parameter of the model for projection. Three different sets of projection have been provided by assuming three separate levels for the parameter. Under the 'low peak' scenario, the parameter is assumed to reach a level of 117, which is observed for the educated group of women in the recent period. It may be mentioned that the corresponding value of the parameter for all women in the country is 113. This set of projection assumes only a marginal increase in sex selection in the next 15 years or so in the country. In the 'medium peak' projection, the parameter, when the country reaches replacement fertility is assumed to be 133. This is the level that has been observed currently among educated women in states belonging to the north-western region. It assumes slight intensification in sex selection. The 'high peak' considers a substantial increase in sex selection and hence in the value of the parameter. It would be 233 and would render the overall level to rise to 124.

P1528

Women, Identity and Fertility in Current Iran: A Case Study on Iranian Turkmen Females

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Iran passed profound social and cultural changes during past decades. The effects of these changes may be seen clearly in generational differences between youths and adults in intellectual and practical patterns. Meanwhile, social identities of new generation of females have had tangible differences with previous generations. These effects may be seen in their attitudes towards fertility behavior. One of the most known ethnic groups of Iran which known as having high fertility levels and patterns is Turkmen of north of Iran. In social sciences resources they have been considered as a pastoral society, more traditional and more conservative, with high fertility and high son preferences. Also, the family organization of them subordinates the interests of women to those of men. During recent decades this society like other parts of Iran have experienced dramatic changes in women status in family and society. The present study has focused on these matters by using a qualitative method and interviewing with 20 Iranian Turkmen female students. Results revealed that new generation of Turkmen females like other Iranian females for their identification rely more on global values of freedom, independence and gender equality. Their important expectancies are including education, occupation, equal gender status in society and community; and for these purposes they consider that having more children is a crucial barrier. New generation of Turkmen females, in addition to other similarities to other new generation of Iranian females, do not consider sex preferences because of changes in attitudes towards son and believe on gender equality. While previous studies on sex preferences among Turkmen revealed that previous generations of Iranian Turkmen females had profound preference on sons than daughters and therefore they raised more sons than daughters. Findings revealed that however ethnicity preference in mate selection of new generation of Turkmen females have been continued among them, patriarchal view towards family and fertility have changed among them which is due to changes in their social identity.

Key words: women identity, Fertility, , Iranian Turkmen females, family structure.

P1529

Theoretical Explanation and Empirical Test to the Continuous High Level of Sex Ratio at Birth in China

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Since 1980s, sex ratio at birth (SRB) in china has began to rise and kept at a high level for almost 30 years. Through years of census data and sampling survey data, it is clear to see that sex ratio at birth is higher than the normal level (105+2) both in the urban area and rural area in China. However, the level of rural area is much higher than urban area, and the difference is growing larger and larger. In addition, different birthrank indicates different level of SRB, higher birthrank, higher SRB. What's more, the phenomenon of high SRB becomes more and more common, from several regions to the whole country.

There are kinds of complex causes for this abnormal phenomenon of SRB level in China. Many scholars think that fetal sex diagnosis 、sex-selective abortion、Under-reporting of female births and female infanticide are the major immediate causes. Actually speaking, the first two factors play a much larger role In China.

In theory, three kinds of perspectives are commonly used to analyze the high level of SRB in China: Economic Theory; Family System Theory and Social Policy Theory. Economic theory holds the idea that the bigger economic utility a child has, the bigger probability for people to have a child. However, in China boys always can give much more economic return to the family when they grow up than girls, as a result, people prefer to have boys which is called "son preference". From the view of family system theory, the family system is the social system in China. The traditional thought of "male superiority to female" "mother-dignity from son" leads to higher culture utility of boys than that of girls. Larger and closer the family network is, more serious the sex preference is. As with the social policy theory, scholars think inequality of social gender and social policy aggravate the sex preference in some degree. All these factors may increase the level of SRB in China.

This paper will use kinds of survey data to analyze the influence of family system、land Institution and family planning policy on sex ratio at birth in China. The results show that having a family system or organization means a higher sex ratio; the fairer the social policy is, the normal the sex ratio is; Family planning policy has a significant influence on the sex ratio level. The high level of SRB in China is caused by various factors. With these data results, we may be able to find out some effective means to solve the acute problem of SRB in China.

P1531

Gender Distinction of Family Caregivers for the Elderly and Policy Implications

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Chinese society is experiencing a stage of rapid aging, the size of he oldest old among the elderly population will grow faster. Compared with the young elderly, the older and the oldest elderly care have a greater need in daily life, their care needs mainly by family members. For sick or disabled elderly, long-term care/nursing will cause higher demand for the expenditure of caregiver's time, physical, economic and psychological undertaking. If not to be supported from outside the family, it will cause two aspects of the problem for a care provider and the care receiver. For younger care givers, too much family care burden might affect their quality of life and career. Under the situation of women being caregivers, it is in particularly disadvantaged for women's development. For older caregivers, they are already older; care may be limited to the elderly, so as to reduce the quality of care. Therefore, understanding the characters of the caregivers groups is helpful for formulating family support policies.

This article will use the 2010 national survey on Chinese womem's social status survey data and apply multivariate statistical methods to describe and analyze the demographic characteristics of family caregivers, estimate the burden of caregivers of different features, discussion the related family support policy implications. "Care" is intended to achieve healthy aging. According to the physiological, psychological and social dimensions of health, the care also should have the connotation of corresponding three dimensional, not just on nursing care of patients. In this article care is divided into three types: to help with daily activities, care the sick, spiritual solace, and discusses three kinds of characteristics of caregivers, such as their age, gender, living arrangements and the relationship between the elderly and them.

Based on previous research on care of the elderly, care provider characteristics are associated with the following factors: (1) the age, sex and marital status of the elderly, and (2) child survival and health status and living arrangements of older persons, and (3) the degree of disability and care needs of older persons, and (4) rural-urban and regional difference, and (5) community service. This article will study the care provider groups and the relevance of these factors, different care provider's role in the care of the elderly and its alternatives, from which summarizes features with regularity.
This research involved of variable has: elderly of age, and gender and marriage status, elderly children status, elderly daily activities ability and help demand, main helper for elderly daily activities (gender, estimated age and the relationship of the elderly and the main helper), the number of person providing help for the elderly near a week, main caregiver for sick elderly.

The finding of this research:

1. The helping demand of the elderly daily activities ability increases with age, which is obvious linear growth above 85 yeas old.
2. The elderly with no spouse mainly relies on children generation providing daily activities help. The caregiver is often son or daughter-in-law. The proportion of daughter providing help for female elderly and town elderly is relatively higher. Generally speaking, the caregivers are most of women. Meanwhile, son in spirit comfort and difficulties help aspects has significantly advantage.
3. Characteristics of caregivers have clear rural-urban and regional differences. Sons and daughters in the city are the main caregivers for the sick elderly, while in towns and rural areas is the son and daughter-in-law. Third generation for providing

P1533

Extended Lives or Extended Sufferings for Women? Gender Differentials in Health Status of Elderly in India

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As we begin the 21st century, population ageing is poised to emerge as a pre-eminent worldwide phenomenon.On one hand, population ageing represents a human success story,and on the other, steady and sustained growth of older people poses myriad challenges to policy makers and societies. India is also experiencing rapid demographic changes in recent years which will have definite implications for demographic pattern,gender equity,health standards and governmental policies and programs.In India almost 50% of the elderly have chronic diseases. WHO (2004) projected that in the next 10 years, over 60 million people will die from chronic diseases in India alone.

While the sex ratio generally favours men in India, the trend reverses in favour of females at older ages. More often than not, women are over burdened with cumulative inequalities throughout the life cycle from womb to tomb as a result of socio-cultural and economic discriminatory practices.Thus, a longer life span is directly correlated to greater morbidity and higher incidence of chronic diseases and sufferings for the older women.In India, elderly women are more vulnerable and lack resources, support and freedom to seek health care.However, so far only few studies addressed the existing gender differentials in health status as well as in health seeking behavior, particularly among the aged population.

This paper aims to find out the gender differentials between self-reported morbidity and symptom-based morbidity of selected chronic diseases between men and women aged 50+ for India and selected states.An attempt is made to identify the risk factors that are leading to gender differentials in health among the elderly.Further, it will also probe the extent of gender differentials in treatment seeking behavior.

The paper is based on the data from "Study of Global Ageing and Adult Health (SAGE-India)", a nationally representative survey undertaken in 2007 by WHO and IIPS.SAGE survey was implemented in the states of Assam,Karnataka,Maharashtra,Rajasthan,Uttar Pradesh and West Bengal.SAGE collected data for two age groups 18-49 and 50+.The analysis in this paper is confined to persons aged 50 and above (sample size=6560).The prevalence of chronic diseases that are included in this analysis are arthritis, stroke, angina, asthma, depression, hypertension, and lung diseases. Statistical analysis included a bi-variate and multivariate regression.

After adjusting for some confounding variables, women showed greater risk of symptom based chronic disease.The study revealed dissimilarity in self-reported morbidity and actual symptom based morbidity between men and women in India, but with different degrees depending on the type of morbidity.This excess can be explained by gender differences in health-seeking behavior for perceived health problems.This gap is wider among the women with less education and from poor households.Moreover women show a higher unmet need for treatment.Concerted actions are needed to reduce the existing gender gaps in health status.

P1601

District Level Estimation of Life Expectancy in Iran

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Life expectancy (at birth) is an estimate of the number of years a baby born in a certain year will expected to live, based on the mortality rates measured in that year. Demographers use the symbol e^0_0 for life expectancy at birth (age 0). However, the index is heavily influenced by the rate of infant mortality. In Iran the life expectancy varies from province to province depends on their mortality level. The main objectives of the paper are to estimate life expectancy for sub provinces population using IMR only.

Secondary data were used for the study. This study is to estimate the life expectancy of sub population. IMR is available for combined, males and females separately.
To estimate the life expectancy regression models were used. We have to fit a regression equation. With the help of this observed life expectancy and infant mortality rate we fit a regression equation. The regression equation is $\mathbf{e}_0^{0:}$ a + (b*IMR) + (c*IMR^2).

We made an attempt to estimate the life expectancy for all the districts of Iran. We used the estimated IMR values for the major provinces for 2010. According to data Esfahan, females had high IMR , Kordestan and Sistan Baloghestan have the lowest life expectancy. Razavi khorasan and Esfahan had high IMR. Golestan had the least difference for the combined and females life expectancy, but for males the least values are in Khozestan and Semnan. The T- Test was also applied and the values are significant.
District level life expectancy was estimated using district level estimated IMR. Thus the models developed in this paper are useful for the estimation of life expectancy at sub population level.

Key Words: life Expectancy, Estimation and IMR

P1603

Mathematical Modeling and Projecting Population of Bangladesh by Sex and Age Group from 2002 to 2031

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In this paper we project the population of Bangladesh by sex and age group from 2002 to 2031 based on a two parameter negative exponential model. It has been observed that a two parameter negative exponential model is suitable for the age patterns of population of Bangladesh for both, male and female. Data for this study comes from 1991 and 2001 population census of Bangladesh. The model validation technique cross-validity prediction power (CVPP) is applied to check on the validity of the model. The observed values of 1991 and 2001 are used to estimate the inter censual annual exponential growth rate by age groups. Finally, age specific inter censual annual growth rates are used to project the population of Bangladesh by sex and age group, considering 2001 census population as base population and assuming fertility and mortality remain constant during the projected period. The population of Bangladesh is projected to increase from 123.9 million in 2001 to 193.7 million in 2031, an increase of 56.39 percent during the projected period. Male population will increase from 63.9 million in 2001 to 100.0 million in 2031, and female population will increase from 60.0 million in 2001 to 93.7 million in 2031, an increase of 56.47 and 56.3 percent, respectively.

P1605

District Level Infant Mortality Rate: An Exposition of Small Area Estimation

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The present study attempt to explore small area estimation techniques for estimation of Infant Mortality rate (IMR) at district level for the major state of India. Since many health data are unavailable at the district level, policymaker sometimes rely on state-level dataset to understand the health need at district level. This leads to the growing demand for district level indicators of development, health, education etc. in the effort for district level monitoring and evaluation regardless of inadequacy of data from vital registration, service statistics and surveys. District level data on births and deaths from Civil Registration System and Service Statistics are inadequate and not access able uniformly for all districts. It is now widely recognized that direct survey estimates for small area (i.e. at district level) are likely to yield unacceptable large standard errors due to the small of sample sizes representing the areas. This small sample sometimes may not give good enough to predict results at district level due to insufficient number of sample and this inadequate sample give indigestible results so there is need to look an alternative approached which can give better estimate at district level. The approach to small area technique is to “borrow strength” from related areas to obtained more accurate estimates. To meet the challenge for the need of district level indicators, the present study is an attempt to assess the data from the available sources and integrate them through small area estimation techniques to provide district level estimation of infant mortality rate (IMR). The synthetic and composite estimation techniques have been used to estimate IMR.The estimates of IMR by small area method provide robust result as evident from small gap from Sample Registration System (SRS) and National Family Health Survey (NFHS-3) at state level. The concluding remark is small area estimation is good for estimating IMR at district level.

P1606

Estimation De L'esperance De Vie A La Naissance Sans Recourir A La Structure Par Âge Des Deces Et De La Population

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Le calcul de l'espérance de vie à la naissance est conditionné par la disponibilité de la structure des décès et de la population par âge et, mieux encore, par sexe si on veut l'obtenir pour les deux sexes séparés. Mais, il n'est pas toujours évident de pouvoir disposer de ces données dans les pays en développement et même dans les pays développés pour les données anciennes. Même lorsqu'elles existent, leur qualité est souvent sujette à caution.

Dans ce cas, on doit recourir aux méthodes indirectes pour "corriger" les séries de décès et la structure de la population pour arriver à une estimation de l'espérance de vie à la naissance.

D'autres méthodes ont été développées dans le but de pallier à cette difficulté, elles mettent en relation l'espérance de vie à la naissance et d'autres indices facilement calculables. Ces dernières méthodes, même si elles n'exigent pas la connaissance détaillée des décès et de la population par âge, elles reposent sur la connaissance de leur répartition pour certains âges.

Devant tous ces problèmes, nous proposons une nouvelle approche qui a l'avantage d'estimer e_0 dans le temps pour un même pays et dans l'espace pour un pays ou une région, des aires géographiques, au sein même de ce pays ou cette région. Elle a,

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Mots clés :
Espérance de vie à la naissance, mortalité, taux brut de mortalité, structure des décès, structure de la population par âge et estimation.

P1607

Regional Contexts Effects on Individual Reproduction Behavior: Data Linkage between Micro-Dataset and Macro-Dataset

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This study focuses on the effect of regional contexts on individual reproductive behavior in Japan. We generate analytical dataset by adding information of towns and villages based on administrative boundaries to individual data obtained from the National Fertility Survey conducted in 2005. A multilevel discrete-time logit model is estimated to examine how regional context are associated with the probability of first birth. The results show that the regional contexts are significantly associated with first birth probability, but the size of coefficients are very small. We need to test what kind of scale of region is most appropriate to explain individual reproductive behavior. Further research investigate useful method to introduce an aggregated qualitative index obtained from micro-dataset to regional contexts macro-dataset.

P1701

An Innovative Model on Needs Assessment of Demographic Statistics in the Selected Asian Countries at the International Publications: Towards Data Monitoring

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There are a number of principles of good practice that must be remembered when collecting information either as part of a needs assessment or an ongoing programme requirement. As we know, data is collected to help in assessing needs, to monitor ongoing projects and programmes, and to assist in evaluations.

The aim of this paper is to highlight and identify needs of demographic statistics in five Asian countries (Iran, Turkey, Pakistan, Malaysia and Indonesia) at the international publications. The paper is designed to answer the main question that do countries with different historical experiences and development levels manifest similar quality and condition of demographic data producing at the international level?

Data are taken from the Demographic Yearbooks which are conducted by United Nations Statistics Division, 1996-2008. According to Kaufman theory on needs, needs assessment is a process for determining and addressing needs, or "gaps" between current conditions and desired conditions. Conceptual framework is divided two categories which are current needs demographic data and those are not producing at the international scale. Finally, we compared with the programme of action of the international conference on population and development (ICPD) Cairo (1994) on policy recommendation for demographic data producing. It involves identifying material weaknesses and strengths, and evaluating possible solutions that take those qualities into consideration.

P1702

Using CSPro (Census and Survey Processing System) Experience from District Level Household and Facility Survey (DLHS-3) in India

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This paper will discuss how CSPro (Census and Survey Processing System) coped with data processing system in a complex large scale survey. A recent large scale survey District Level Household and Facility Survey (DLHS-3), funded by (a Ministry of Health and Family welfare Government of India) used the CSPro package for data entry and fact sheet generation for the survey. The paper will discuss the outcomes of using CSPro and data processing system methods in such a large scale survey. It is suggested that the use of CSPro has achieved a better data quality than other data processing packages would have. The use of CSPro has a number of distinguished advantages, such as improvements in data quality and turnaround times. It will critically review how the quantitative method worked in this specific situation before placing the discussion in its wider data processing system methods and research environment context.

P1703

Reliability in Wife's Reporting of Husband's Age in India: Empirical Evidence from a Large Scale Survey

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Age is one of the most basic and important information collected in almost all demographic and health surveys. Most of the demographic researches on fertility, reproductive health and contraception focus on females of particular age group who are in their reproductive period. Important demographic indicators like fertility, contraception and mortality are estimated on the basis of reporting of the female respondents. This particular study makes an attempt in exploring the degree of matching and mismatching in reporting of the age of the husbands by the wives in India. The present study analyses the concordance and discordance of the reporting of the husband's age as reported by the wife and by the husband himself by using a nationally representative sample size of 42185 couples of National Family Health Survey(NFHS-3, 2005-06). In the present paper, the data analysis has been done using the information of all the couples(ever married as well as currently married couples). Information about the age and education of the husband is collected separately from two sources namely from the husband himself as well as from the wife. There were separate questionnaires for women and men. Women were also asked to report about their husband's age and education. Similarly husbands were also asked to report their own age and education. If a woman reports her husband's age or education different from that reported by the husband himself, we consider it as mismatch, otherwise, it is matching. It is found that in India about 58 percent cases, there is mismatch in reporting of husband's age as reported by the wife and the husband. There is wide regional variation across various states of India in the reporting of the age of the husband by the couples. Many socio-economic and demographic factors influence the mismatch in age reporting by the couples.

P1706

Optimizing Use of Health System Generated Poor Quality Data: Evidence Using MCTS/HMIS Data in Improving Maternal and Child Health Outcomes in Lowest Performing State of Bihar, India

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India is undergoing a paradigm shift, focussing on evidence based approach. Ministry of Health (MoH) is generating individualised & indicator based aggregated data from Mother-Child-Tracking -System (MCTS) and Health-Management-Information-System (HMIS) respectively, however, the quality of data still remains a bottleneck in data use. This paper proposes a methodology for systematic review (step-by-step) of data quality. The methodology should be able to provide

- solution to the problem of identifying the data quality issues,
- specific remedial strategy and
- suggest data driven management at all level of program implementation.

The data is downloaded from the MoH portal for financial years 2010-2011 and 2011-12. The other data used for triangulation are DLHS-3 & NFHS-3.

The steps are

- Framing hypothesis related to program response gaps
- Identifying missing data and checking internal inconsistencies
- Generating relevant indicators using MCTS/ HMIS and triangulation using DLHS/NFHS for external validation
- Classification of results into "program response gaps" and data quality gaps"
- Verifying results with the program managers and community workers through qualitative interactions

The existing denominators are compared with the denominators generated using indirect estimations (UN Manual-X). In addition to the descriptive analysis, whipple's index (WI) is computed for assessing quality of age data. Control chart techniques (for mean, range and SD) are used, assuming Poisson distribution, to identify the data points that are out of control. Both data source are historical, hence ARIMA and VAR techniques are used to assess predictability.

The finding shows that the denominators used for target setting are inappropriate and can be improved using indirect techniques. There are inconsistencies between the two data sources. The control charts suggest that significant proportion of data points of several indicators are out of control. We have shown that LQAS can be used as a tool to identify whether the quality of data is under accepted level of margin.

P1707

The Institute for Health Metrics and Evaluation's Global Health Data Exchange (GHDx)

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The Global Health Data Exchange is a new data catalog for demographic, public health and global health data. It was developed by the Institute for Health Metrics and Evaluation (IHME) at the University of Washington, and launched in March 2011 at the Global Health Metrics and Evaluations conference. The GHDx (www.ghdx.org) was created to address a key issue for global and public health analysis, which is a lack of both knowledge about data and access to data. The GHDx is the first - and currently the only - data catalog that focuses on health-related data on a global scale. The GHDx also brings increased attention to the valuable contributions of data producers such as national statistics agencies, ministries of health, and international organizations. We will make every effort to build the broadest and most in-depth data catalog, and aim to be the go-to source for information about data for researchers, analysts, policy makers and others in the global health space.

P1801

Fertility Impact of Family Planning Programme in Nepal: Evaluation of Family Planning Programme Using Prevalence Model

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Fertility impact of family planning methods is universal phenomenon. In many developing countries fertility transition in achieved mainly due to expansion of family planning programmes. In Nepal, organized family planning programme started in late 1950s. But impact of family planning programme was observed from mid 1970s only. To date, no empirical study is conducted to estimate the impact of family planning programme in fertility reduction. This paper uses prevalence model to examine fertility impact of family planning. This study uses data from Nepal Demographic and Health Survey 2006. The study elucidates some important findings with policy relevancy for meeting replacement level fertility by 2027 as endorsed in Population Perspective Plan. (i) Government programme sources cover 76.4 percent of total family planning utilization with a corresponding prevalence rate of 36.6 percent in 48 percent national average. (ii) Annually family planning methods are responsible to averting around 626 thousands births. Of the total births averted, female sterilization alone contributes 40 percent followed by injectables (22.5%) and male sterilization (14.0%). (iii) The pre-transition total fertility of Nepal was 6.33 (in 1976) which arrived at 3.1 in 2006. The study finds that in the fertility reduction of 3.23 births in the last three decades, contribution of family planning was slightly more than 80 percent. The study offers two major policy and academic considerations. First, role of family planning in reducing fertility is unavoidable. Government of Nepal has to continue programme intervention in increasing the access of quality family planning services. Second, Nepal still observes high unmet need of family planning methods. Satisfied the need, the fertility decline of Nepal would take a different course. Hence, unmet need adjusted study is required to estimate the fertility trend of Nepal.

P1802

Priorities and Issues of Reproductive Health in Policies and Programs in Bangladesh: A Result based Post ICPD Analysis

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There was serious concern of low performance of reproductive health indicators in Bangladesh including maternal mortality ratio which was almost plateau over last decades. There was no success story in other areas of reproductive health except family planning before ICPD. After the paradigm shift of ICPD-94, there were radical changes of priorities agendas of reproductive health in the policy and program level. As a result, there was substantial improvement in the arena of reproductive health in recent years. The maternal mortality ratio has been reduced sixty six percent in 2010 from 1991. There was also significant progress in the health system of the country including wider service delivery up to the doorstep at the community level, quality of care, public private partnership, demand side intervention etc. The aim of the paper is to dissect the policy documents of the country to show how the changed priority agendas, adopted in reproductive health after ICPD, accelerated the progress in this arena. This will ultimately help to achieve the MDG-5 targets by 2015. The policy issues in reproductive health also focused here that could retard some components to achieve the millennium targets.

The top down policy planning in health in the country failed to capture some regional/micro level issues that will lag uniform performance of reproductive health services. As a result, a section of population will be marginalized and remain vulnerable even if national average is on the track. There needs demand driven bottom-up policy formulation in reproductive health in Bangladesh pertaining to penetrate the benefits to every corner irrespective of regions and backward communities.

P1806

Hundred Percent out of Pocket Payment to Cope with Health Expenditure in Rural Areas: Can We Achieve Universal Health Coverage?

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Bangladesh is a very small country facing different challenges to meet the very basic needs, i.e. education, food, housing, health, for its huge population. Providing health care services for the population is one of the biggest challenges for government as it has very limited resources. Modern medicine and treatments are costly and most of the people need to struggle to manage money for the cost of care. Cost is also an important barrier for under utilization and access of health care in Bangladesh. Where from rural people manage health care costs is an area of interests for researchers, policy makers and academicians.

The objective of the study is to know the available financial sources rural people have in managing health care costs for their family members.

A cross sectional study was conducted among the household heads from two villages in Bangladesh. A total of 450 households (53%=238 males and 47%=212 females) selected through a multistage sampling techniques. A semi-structure questionnaire was used for the household survey. The quantitative data analyzed using Statistical Package for the Social Sciences (Version SPSS-17.0) to generate descriptive analysis.

Hundred % out of pocket payment (OPP). There is no insurance or community finding. On an average they spent TK10000.00 (US$1=TK72) per family per year. Twenty four % different types of sources they used for managing health care costs. Major sources ware taking loans on interest, loans without interests from neighbours and relatives, loan from drug stores; sell-out agricultural assets, domestic animals, agricultural product and received help from people. 46 % of the total amount spent from themselves. Rest of the money they had to manage from different sources. Lent from relatives, neighbors and local drug stores were the most common sources from where they got 20 % of the total health expenditure.

Neither own money nor any insurance or community fund pooling mechanism was available at rural areas. Various uncertain sources they had to explore in managing health care costs. Still social capital (neighbors, relatives, drug stores) was the main hope in managing health expenditure. Immediate health policy reform needed for replacing the burden of 100% OPP in the rural areas.

P1807

Double Burden of Malnutrition in India: Estimating a New Policy Challenge

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In India, problems related to underweight still exist at a considerable rate and has demonstrated a very slow improvement. However, on the other hand, prevalence of overweight and obesity has increased at a very high rate. In a country like India, it was quite natural that researches and policies have been focused to reduce undernutrition among rural and poor population. In this paper an attempt has been made to convince the policy makers that now it's a time to adopt a holistic approach to tackle the overall malnutrition in the society, because urban India is within the second stage of nutrition transition. Thus India is very much likely to face a 'double burden of malnutrition', that is a simultaneous existence of under and overweight problems given its rapidly developing economic feature, in near future.

Thus we have tried to measure the prevalence, depth and severity in underweight, overweight and then the overall burden of malnutrition existing in India. Nutritional aspects, i.e. either underweight or overweight, have so far been measured through Body Mass Index (BMI). However, in order to assess the overall nutritional ill-being (prevalence, depth and severity), we have calculated one single index comprising of both the underweight and overweight proportions of a society. For this, I have followed the axioms of Sub-Group Consistent Poverty Indices by Foster and Shorrocks (1991) and borrowed three most conventional poverty indices (head-count ratio, poverty gap index and squared poverty gap index) in nutrition perspective. The sub-groups are based on State, type of place of residence, SLI and age group.

Drawing data from the NFHS- 2 & 3, it has been shown by my analysis that underweight problems seem to cut across all the socio-economic sections of the population, whereas overweight and obesity are strictly socially segregated and remain concentrated mainly among the rich and the urban population. However, the magnitudes of overall malnourishment have been found to be dependent on the trade-off value between the underweight and overweight indices existing within the societies of India. We have estimated the overall malnourishment considering trade-off value as 1.0; as well as the figure derived from the substitutability between underweight and overweight. Both the measures show that the urban women are more malnourished. Prevalence of overall nutritional ill-being is higher among poor people closely followed by the well-to-do section. However, the depth and severity figures pose higher risk for the high SLI group, showing the highest nutritional inequality among these people.

P1808

Women and HIV/AIDS in Iran: Plans and Policies for Reducing and Controling HIV Epidemic among Women

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Women constitute half of the world's population. This population should be active and healthy to cooperate in the development of every society. HIV infection is a worldwide epidemic which can be one of the major causes that take women's health under attack and can affect their participation and efficiency in the societies.

Statistics demonstrate that 34 million people are living with HIV/AIDS from which 51 percent are women. Governments can interfere by demographic policies and social planning tools with the aim of empowerment of infected women and reduction of health and social problems such as stigma, gender discrimination and social exclusion and also provide access to the treatments.

During recent decades, by the worldwide efforts of international organizations and United Nations, HIV/AIDS concern made governments to set policies toward this epidemic disease and reduction of new infections and deaths is now a vital issue in health and social policies among nations. Findings indicate that some governments such as Sub Sahara countries had had successes in administration of HIV\AIDS infected women's problems and in the reduction of new infections in general.

According to recent statistics in Iran there had been an increase in number of HIV positive women. As women consider being in a gender inequality structure in Iran society, HIV positive woman require specific programs which conclude supports and cares in different areas. This article focuses on demographic plans and policies which had been made with the aim of reduction of number of HIV infected women in Iran and pursue the different ways of battling with HIV in women. The writers also identify the gaps and the shortages in demographic and social policies through HIV infected women in Iran.

Key words: women's health, HIV/AIDS, demographic plans and policies, gender inequality

P1809

Poor Performing Primary Health Centre in Low Resource Settings of Northern India: A case study of Jhansi district in Uttar Pradesh

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National Rural Health Mission (NRHM) has launched with the objective of improving the access to quality health care services for rural poor, especially women and children. Uttar Pradesh is one of the most populous and less developed states of India, where all development and health parameters have remained low. Literatures reveal that enormous gap exists between demand and supply for seeking the health care which leads to remain high maternal mortality in poor settings.

This paper investigates the functioning of primary health centres towards maternal and newborn health care services. This study presents an overview of key findings from quantitative survey conducted in 2010 of health facilities infrastructure in Jhansi district and district health management information system (HMIS) database. The survey collected data from all 36 additional primary health centres (APHC) on physical infrastructure, equipments, human resource, drugs and supply.

Every year, more than most of NRHM budget allocated on primary health centres to provide quality of maternal and child health services for rural population. Data from HMIS shows that all the APHC are providing normal delivery but the present survey findings reveal that only one-fifth of the APHC conducting normal delivery. The fact is that there are sub centres in the APHCs premises, conducting normal delivery. Findings reveal that sub centre conducting normal delivery, not having even bed or necessary equipments in labor room while on contrary, APHCs having sufficient infrastructure but not conducting delivery. The reasons cited for such unmet need for delivery services, "administrative issue" as responded some of the medical officer in-charge.

Despite good infrastructure in APHCs, performance of maternal health care services is negligible. Instead of decentralization, health services and trained human resources are mainly concentrated at the block headquarters in northern India. The study underlines the fact that the APHCs are unable to deliver the intended services due to the misalignment of the workforce relative to the need and improper utilisation of the infrastructure.

P1810

Family Welfare Programme in Bihar: Does Expenditure Matters to Performance?

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Since the launch of the reproductive and child health policy regime in 1998-99, there has been a massive rise in government expenditure on family welfare programmes in India and state. Several state have been improving the performance under RCH approach, But Bihar known as a poor performing state under RCH approach. That's why there is an apprehension that such a move has been lead to decline in performance if an alternative framework has not developed to manage RCH approach. This paper makes a systematic effort to assess the performance of the family welfare programmes vis-à-vis the trends in expenditure and also examine does expenditure matter for performance of family welfare programmes. The trends in key performance indicators for Bihar reveal that progress has been slow and limited in the post- RCH policy regime. The increase in family planning expenditure did not have any positive impact on total fertility rate and infant mortality rate, because the pace of reduction in the total fertility rate and infant mortality rate has slowed. Also it found that inconsistencies in the linkage between increased expenditure and couple protection rate during post-rch era. Overall, the comparative trends show a gradual progress in key of programme indicator (contraceptive prevalence rate, Institutional Delivery, Immunization) with corresponding increase in expenditure from pre- RCH to post- RCH policy regime. It is evidentially clear that in the absence of suitable mechanism to operationalise RCH approach under the integrated banner of family welfare programme, the exponential increase in expenditure alone cannot lead to commensurate a positive impact on key performance and outcome indicators. That's why; there is need suitable mechanism to operationalise, not only increase expenditure.

P1901

District Level Estimation of Life Expectancy in Iran

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Life expectancy (at birth) is an estimate of the number of years a baby born in a certain year will expected to live, based on the mortality rates measured in that year. Demographers use the symbol e^0_0 for life expectancy at birth (age 0). However, the index is heavily influenced by the rate of infant mortality. In Iran the life expectancy varies from province to province depends on their mortality level. The main objectives of the paper are to estimate life expectancy for sub provinces population using IMR only.

Secondary data were used for the study. This study is to estimate the life expectancy of sub population. IMR is available for combined, males and females separately.

To estimate the life expectancy regression models were used. We have to fit a regression equation. With the help of this observed life expectancy and infant mortality rate we fit a regression equation. The regression equation is $\mathbf{e}_0^{0:}$ a + (b*IMR) + (c*IMR^2).

We made an attempt to estimate the life expectancy for all the districts of Iran. We used the estimated IMR values for the major provinces for 2010. According to data Esfahan, females had high IMR , Kordestan and Sistan Baloghestan have the lowest life expectancy. Razavi khorasan and Esfahan had high IMR. Golestan had the least difference for the combined and females life expectancy, but for males the least values are in Khozestan and Semnan. The T- Test was also applied and the values are significant.

District level life expectancy was estimated using district level estimated IMR. Thus the models developed in this paper are useful for the estimation of life expectancy at sub population level.

Key Words: life Expectancy, Estimation and IMR

P1902

Does Living in Metro City and Non-metro Urban Areas Propel Differences in Maternal Medical Care and Child Mortality in India

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Research on urban health and urban health disparities in India has been greatly focused on health disparities by rural-urban and socio-economic groups. However, an unscathed area in this field is whether urban health varies for those residing in metro cities and non-metro urban areas (suburban, small-medium size cities and towns). This question is of critical important in Indian context, where socio-economic growth and policy focus is greatly skewed towards metro cities and often small cities and towns are neglected.

This study is a first maiden effort to quantify Maternal Medical Care (MMC) and child mortality disparities within urban areas by place of residence in metro cities and non-metro urban areas.

The study utilized data from Indian Human Development Survey (IHDS), 2005. IHDS data is the first of its kind in India, which provides information on various health indicators separately for metro cities and other urban areas. Bivariate and multivariate regression models are used to measure the disparities in MMC and childhood mortality.

Results indicates that 82 percent of women in metro cities received 3 and more ANCs, compared with only 61 percent in other urban areas. Similarly, 75 percent of women had institutional deliveries in metro cities compared with only 59 percent in non-metro urban areas. The probability of dying neonates (33/1000), infants (47/1000) and under five children (59/1000) in non-metro urban areas is substantially higher compared with metro cities. Results from multivariate regression models also affirm these findings.

Systematic assessment of MMC and childhood mortality disparities suggests that non-metro urban areas are at great disadvantage in terms of maternal and child health status compared with their counterparts in metro cities. Non-metro urban areas should come under priority of national health policies. Improving health conditions of non-metro urban areas is critical for building healthy cities.

P1904

A Qualitative Study of Singaporean's Perceptions of & Attitudes Towards Long Term Care Services

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In light of the rapidly ageing population in Singapore, the proportion of older persons requiring medical and long term care has been increasing and is expected to continue to increase over the years. In order to reduce the burden on acute hospitals, Long Term Care (LTC) Services such as Day Rehabilitation Centres (DRC), Dementia Day Care Centres (DDCC), Home Nursing (HN), Home Medical (HM), Home Therapy (HT) and Nursing Homes (NH), have been put in place as means to ensure appropriate post-discharge care and thereby reducing hospital re-admission. Despite the importance of LTC services, the withdrawal rates for LTC services referrals, except for NH, have been high (61 to 71%). However, little is known of the factors associated with the decisions to utilize these LTC services amongst the referred patients requiring these services in Singapore.

The aim of this study was to highlight the key factors associated with the utilization of the various Long Term Care (LTC) services in Singapore.

Face-to-face in-depth interviews were conducted with existing patients and their caregivers listed on the Agency for Integrated Care (AIC)'s referral database. A total of 81 interviews, consisting of interviews with 24 patients and 57 caregivers (CGs) were conducted. Interviews were transcribed verbatim. Analysis was done by coding these transcripts into key themes using NVivo9.

Factors such as convenience of utilization, patient's willingness to use services, perception of services and manageability of caregiving duties contribute to the decision to utilize the Long Term Care (LTC) services. These factors indicate that families play an important role in the decision of whether the patients use LTC services. In particular, caregiver's capacity to care surfaced as a major influence in the decision to utilize the services. Patient's needs also played a role in the decision to utilize the services.

Findings are indicative that the decision to utilize the LTC service is largely caregiver-centric rather than patient-centric. The study also highlighted how the idea of patient's "need" for services is framed along the lines of caregiver's capacity to care instead of the actual need as postulated by the patient's medical condition.

P1905

Pregnancy Complications and Birth Outcome: Do Health Care Services Make a Difference?

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While most pregnancies and births are uneventful, all pregnancies are at risk. Complications of pregnancy are the symptoms and problems that are associated with pregnancy. Many women face some minor health problems and pregnancy complications, but there are some women who unfortunately get faced with more serious complications during pregnancy. The paper attempts to study the effect of pregnancy complications on birth outcomes and its association with use of Maternal Health Care services using third round of District level Household and Facility Survey data (DLHS-3). Multivariate and factor analysis has performed to see the interrelationship between complications in terms of their common underlying dimensions like reproductive health complications. Preliminary findings shows that, more than half of the Indian women were suffering from any type of pregnancy related complications belonging to younger age group and residing in rural areas. It also shows prevalence of pregnancy complications has a greater impact on birth outcome. It is found from the study that women with any pregnancy complications had a more than twice of giving still birth than those does not have any complications. Women those reporting of having paleness/giddiness and swelling of hands and feet during pregnancy, report of delivered higher still births. Near about 59 percent of women gone for full ANC checkups (three ANC visit, TT injection and IFA tablets/syrup) having any complications during pregnancy. Result also shows having any complications during pregnancy may lead complications during delivery such as labour related complications. 61 percent of women reported of any delivery complications which is higher than reported pregnancy complications. Difference has found among Maternal Health Care services users and non-users in birth outcome. Prevalence of delivered still birth is higher among non-users (MHC) as compare to users. It needs a greater attention to improve health care services and awareness among common people and health care providers. It requires the closest monitoring, both during and after pregnancy, in order to optimize maternal and foetal outcomes by providing good health care services.

Key Words: Pregnancy Complication, Birth Outcome, Health Care Services, Still Birth.

P1906

The Effect of Quality Family Planning Services on Contraceptive Switching Behavior in Indonesia. (The Analysis of the 2007 Demographic and Health Survey)

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The success of family planning (FP) program is measured not only by the improvement of contraceptive prevalence but also by the effectiveness and duration of contraceptive use. Therefore, in the future FP program needs to be focused in supporting couples in order to sustain contraceptive use through its good quality of FP services. Good quality of FP services also makes the risk of unwanted pregnancy lower as couples will be more devoted to practice a specific contraceptive method correctly.

This research uses the data of the 2007 Indonesia Demographic and Health Survey (IDHS) calendar data by employing a random-effect logistic regression model. The objective is to study the influence of FP services quality and other socioeconomic and demographic factors on switching contraceptive behavior in Indonesia.

The results of descriptive analysis show that the percentage of contraceptive switching is higher on women who are younger, have less children, less than 10 years of marital age, have high education, have high economic status, who did not get informed choice and get visit from FP officers with in last 6 months, who use implants, stop using contraceptive in order to get others method which more effective and living in urban areas.

The multivariate analysis results show that the quality of FP services which consists of informed choice and FP officer's visit significantly influence the possibility of FP acceptor to switch their contraceptive method. The result of this research also supports the previous researches that socio economic and demography factors significantly influence the possibility of FP acceptor to switch their contraceptive method.

Key words : family planning, quality of services, contraceptive switching, random effects.

P1907

Inclusive Environment for Health Care Access- Exploring the Relevance of Sensitive Providers in Reaching the Unreached Children

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India is a signatory to the Alma Ata declaration which seeks to ensure universal health care to all people. In the last few decades, some health indicators such as life expectancy; crude death, infant and maternal mortality rates; have improved. However, social disparities continue to persist. Social exclusion of the unreached groups affects their access to health care services. Minimizing it is likely to improve their access and result in inclusive development process.

The present paper deals with the issues of social discrimination and exclusion by attempting to evolve a typology for understanding it. A reasoning and evolution of social discrimination has been examined. The thrust in this paper is on the experience of dalit children in accessing health care and the consequent discrimination faced. These experiences have been used to understand the spheres and form of social discrimination and the personnel who practice discrimination at different levels of health care provisioning. The paper has also tried to locate the dalit children in the larger social frame to understand the factors which make them vulnerable and expose them to exclusion.

The present paper endeavours to explore the public health challenges for ensuring access to health care services among the dalit children and youth. It examines the determinants of accessing health care; and ways in which health policies and programme address the issue of social exclusion in access to care among dalit children and youth. Constraints experienced by health care providers and users have also been examined.

The secondary data from NFHS 3 and DLHS 2004-05; and fieldwork data.

Simple multivariate analysis has been used for processing the secondary data. The primary data was collected from selected villages of Dholka Taluka of Ahmadabad district, Gujarat. Tools and techniques employed were in-depth interviews, focus group discussion, observation and consultative meetings using the semi-structured questionnaire schedule, checklist and field notes. An index of discrimination has been developed. Narrative analysis and interpretative phenomenology were used for qualitative data analysis.

Dalit children and youth have poorer access to health care services as compared to non-dalits. However, if the health care provider is sensitive towards social exclusion of dalits, then access is possible and often good. Thus sensitivity towards social exclusion in provisioning and implementation enhances the scope of meeting public health challenges. The paper illustrates that the experiences of discrimination are varied in terms of form and spheres. Health care providers at higher hierarchy of health services are less discriminating as compare the grassroots level providers, both in public as well as private sector. Access to care among dalit children is better if the care provider is sensitive to caste–based discrimination.

P1908

Estimation of Births Averted Due to Use of Family Planning Methods in Major States of India

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This study is an attempt to estimate the births averted due to use of contraception using the latest available data for 20 Indian states. This study also aimed estimate how many extra births could have been avoided if it is assumed that the unmet need for contraception can be fulfilled. The estimation of births averted has been done by using TFR method applied by Liu and others (2008). Findings of this study show wide variation in births averted at the state level. The estimate of births averted not only provides an approximation of the number of births that can occur if that had not been prevented by using contraception, it also show that the use of contraception has significant impact on reducing the fertility level. It can also conclude that even if the sterilization is fully effective method and use of sterilization is more but still if this method is not properly practiced then the effect of the method for birth aversion cannot be satisfied and thereby the target of reducing fertility level cannot achieve in the way it can be expected.

P1909

Socio-economic Determinants of Health Seeking Behavior of Indian Youth

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The young are the present as well future of society. India is second most populous country after China. As per the 2001 Census of India the population of youth is 195 million. Health and health seeking behavior of youth is influenced by many factors e.g. age, gender, education, place of residence, caste and religion. Thirty-one percent of young women and 14 percent of young men are illiterate. Only 29 percent of young women and 38 percent of young men have completed 10 or more years of education. Nationwide Survey (NFHS3) shows that seventy percent of women and 88 percent of men age 15-24 have at least weekly exposure to any kind of media. The health status and health seeking behavior is not similar across India even it is differ within state among different social groups. Therefore it is necessary to study the health seeking behavior of the youth in different regions and among various social groups of India. The present paper examines the factors determining health seeking behavior of Indian youth and to study the relationship between their health awareness and health seeking behavior. Data are drawn from a Large Scale Survey (Youth in India: Situations and Needs Study) conducted by IIPS and Population Council, India in 2006-2007 in six states of India. It covers total of 50848 young people out of 8052 married young men, 11522 unmarried men, 13912 married young women and 17362 unmarried young women. Bivariate and multivariate techniques were applied for the analysis. The study reveals that knowledge about health is very poor among Indian Youth. The youth have shy about seeking sexual and reproductive health services. In addition to socio- economic factors, availability and quality of health services are also influencing health seeking behavior of Indian youth. Large proportion of young men and women are seeking advice or treatment from a private provider or facility irrespective of the type of problems.

P1910

Changes in Health Inequality among Korean Adolescents Before and After School Meals

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Currently debated issue in the last elections in Korea was offering free meals at schools. Since adolescent spend most of their days in school, it is considered that school meal play an important role in maintaining health. And the adolescent prevalence of obesity has been increasing. (From 4.3% in 1979 to 13.1% in 2008) In the past, adolescent nutrition has differed in relation to parental income. It resulted of varying states of health on adolescent. While parental social economic status and nutritional factors have been widely studied by a number of previous studies on adolescent obesity; little attention has been paid to school meal factors. This study examines the impact of school meals of adolescent in Korea.

The aim of this paper is to explore the relationship between nutritional condition and socioeconomic status among Korean adolescents, focusing on whether or not the relationship became similar after the school meals.

We will employ the Korea Youth Risk Behavior Web-based Survey(2005,2010) conducted by the Korea Center for Disease Control and Prevention to compute the prevalence of chronic disease death before and after the school meals. The analysis was restricted to Korean adolescents aged 14-19. Parental academic background and family affluence score were considered as indicators of social economic status on adolescent. Regression analysis is used to identify parental SES factors

It may result that states of health on adolescents is better than before starting school meals. When the school meal is identified as an important factor of adolescent health, this finding will be a useful resource for school nutrition policies in Korea and will cut down health problems on adolescent. The study will be able to suggest expand school meals should be simultaneously considered in understanding adolescent and parental social economic status.

P1911

Parent-Adolescent Communication and Adolescent's Mental Health

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A cross-sessional study was carried out in oder to: 1) Describe the parent-adolescent communication, 2) Determine the relationship between the parent-adolescent communication and adolescent's mental health. The household survey was conducted of 2252 parents of adolescent 13-19 years of age residing in the Chilinh district-Haiduong province Vietnam. Data from parents about communication was linked with socio-economic data from DSS-CHILILAB. It also was linked with mental health data from the overall study of adolescent. The factor analysis was used for setting contracts of communication from 15 items. The multivariate logistics regression model was used to detemine the relationship betweent parent-adolescent communication and adolescent's mental health, controlling for confouding variables. Results: The communication between parent and adolescent was quite well in all 3 aspects. The pecentage of parent-adolescent who has listenning and understanding each other, equity communication and the openness are 97,5%; 84,0% and 82,1%, respectively. The barriers of parent-adolescent communications are adolescent's characteristics and the nature of topics. The rate of parent talking with adolescent about adolescent's behavior and diet reasonably high (90%) while the rate of parent talking on topics related to love, gender or sexual intercourse were very low (30.7%; 23.8% and 17,4%, respectively). The adolescent who lack of openness when communicate with parent suffered from stress 3.2 times ($p<0,001$) more than others and suffered from lonely 1.7 times ($p<0.05$) more than others. In addition, parent communicate with adoloscent equitily was the protective factor for adolescent's mental health (ex lonely and sadness). Parent and adolescent need to listen and understand, make equality and openness when talking with each other. The researchers should conduct the intervention studies to enhance the parent-adolescent communication as well as confirming the role of the parent-adolescent communication for adolescent's mental health.

Key words: adolescents, communication between parents and adolescents, mental health, CHILILAB-Vietnam

P1912

Does Distance Matter? Access to Maternity Services by Bangladeshi Rural Women

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The maternal mortality ratio (MMR) of Bangladesh is one of the highest in the world. The government health facilities provide free reproductive health services, but the cost of medicines and surgical procedures in the case of complications and transportation cost to health facility is negatively affecting the utilization for the low income group. In order to achieve the Millennium Development Goal of reducing maternal mortality to 143 by the year 2015, the government of Bangladesh is undertaking different approaches.

The purpose of this study was to examine whether distance is a matter to access the nearest health facilities for receiving maternal health care service by rural women in Bangladesh.

This study used data from a baseline household survey evaluating the impact of demand side financing (DSF) projects on maternal health care services. A quasi-experimental design was used in the cross-sectional survey where 3300 mothers have been interviewed who had delivered a birth within last year preceding the survey. The study interviewed 3300 women from 22 sub-districts of Bangladesh in 2010 using a structured questionnaire.

Fifty three percent women received first ANC from a health facility and half of them travelled less than 5 km distance, 31 percent travelled 5 km or more distances and the rest could not report the distance. In case of delivery service, 19 percent women went to a health center where 33 percent received services from below 5 km distance and 36 percent 5 km or above distance. It is noted that 10 percent women received PNC services from a health center and among them about half of the women received the service from below 5 km distance and 33 percent received 5 km or above distances.

Those women who travelled less than 5 km distance for ANC service, on average spent taka 47(US$ 0.67) and 54 percent women spent taka 122(US$ 1.74) for travelling 5 km or above distance. Similarly it is found that for delivery care, 52 percent women on average spent taka 191(US$ 2.73) for less than 5 km distance and 48 percent spent 3.5 times more for beyond 5 km distance or above. For PNC service, 52 percent women spent taka 62(US$ 0.89) on average for 5 km or less and about 49 percent women spent taka 207(US$ 2.96) for 5 km distance or more which is also 3.5 times higher.
It is clear from the findings that the proportion of women residing near to health facility are more likely to avail maternity services than those who reside more distant areas from the health facility as the cost of transportation increases significantly with the increase of distance in the rural context of Bangladesh.

P1913

Neoliberal Cities and the Question of Social Protection: An Enquiry in Terms of Housing and Basic Services in Urban India

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The urban development paradigm in India in the last few years has been accused of being driven by neo-liberal market forces. A major restructuring of urban spaces is observed in response to such policies that is characterized by privatization of basic services, withdrawal of state from urban development and increasing gentrification to expand space for elitist consumption. The present study attempts to trace out the new forms of vulnerability and social insecurity faced by the poor and more crucially, the population bordering the poverty line in terms of increasing cost to afford housing and access to basic services under this new regime of urban development. The NSSO unit level data pertaining to consumption expenditure, housing and other amenities are used to show the interdependence between poverty, availability of amenities and quality of life for three consecutive periods (1992-'93, 2002-'03, and 2008-'09). Distribution of availability and adequacy of basic services have shown according to different 'Relative MPCE Classes to the poverty line', which provides an ideal view regarding the poverty depth, or the situation of the households who appeared to be above the poverty line but are facing serious challenges in accessing public services or affordable housing facilities. Moreover, a semi-logarithmic dummy variable model have been used to identify the appropriate income classes which are essentially benefitted by all minimal needs to obtain a decent standard of living in urban areas. Results show the fact that the recent neo-liberal policies have sequentially made the cities as the negotiated spaces for the poor people as the possession of affordable housing and basic amenities has become essentially a service cornered by middle-classes. Moreover, the validity of the present official poverty line appears to be also questionable that grants very minimal weightages to the basic services needs and the rising cost to maintain these needs in urban areas due to sequential withdrawal of state and local governance from the undercapitalized public utility services and more emphasis to value added services. The concluding session also portrays the rising politics of cleaning up the city as an added manifestation of these policies that requires a major overhauling of the persistent governance framework as the only effective solution.

Keywords: Neo-liberal, Vulnerability, Social Insecurity, Relative MPCE, Affordable Housing, Middle Classes, Dummy Variable

P1914

Probing the Factors Engulfing Adolescent Boys into Substance Abuse in India

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India is standing at a crucial juncture relating to substance abuse especially alcohol and tobacco use among adolescent boys. Substance abuse in the country remains alarming high in urban and rural areas. The use of Alcohol and tobacco is very popular among larger masses, including the adolescents. The country is passing through a crucial phase of epidemiological shift. The harmful use of alcohol is a serious health burden, and it affects virtually all individuals on an international scale. Health problems from dangerous tobacco use arise in the form of acute and chronic conditions, and adverse social consequences are common when they are associated with alcohol consumption. It is estimated that India would have fastest rate of deaths attributable to substance abuse due to the high addiction rate during youth periods of life. This would take huge toll on the nation's aspiration to lead in economic, social and environmental health.

In order to address the issue, this paper aims to assess the current scenario of substance abuse among adolescent boys in India by identifying the key factors which are resulting in engulfing them into Substance abuse. Probing the answer from NFHS-3 conducted during 2005-06, which collected information on several emerging issues including alcohol and tobacco consumption from a nationally representative sample of 109,041 households, 124,385 women age 15-49 and 74,369 men age 15-54. Adolescent boys of age 15-19 years cover more than one fifth (13,078) of the sample men population.

Bivariate and multivariate techniques, correlation matrix and concentration index along with G.I.S. tools have been used for the analysis.

Findings indicate that the prevalence of substance abuse is the highest among those adolescent boys who are illiterate, have low exposure to mass media, living away from home for more than one month, belonging to poorest section of the society and living in North-East region of the country. Age, education, caste, religion, wealth and place of residence have significant effect on both tobacco use and alcohol use. In addition, mass media, gender role, family structure and region were found to have significant effect on tobacco use and mobility to have significant effect on alcohol use. The concentration of alcohol and tobacco users is towards the poorer section of the society and towards less educated strata of adolescent boys.

Adolescents must be educated and make aware of harmful effects of substance abuse through special programmes, especially through peer based approach. Parental awareness should be enhanced to avoid drinking and smoking before children. Electronic as well as print media should be strengthened to highlight the health warnings and implications of alcohol and tobacco consumption focusing at its life time risk.

P1915

Declining Trend of Fertility Change: A Parity Progression Ratio Approach

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Different National Family Health Survey (NFHS) in India reveals that the total fertility is in declining trend. The estimation of trends of parity progression ratios (PPR here after) obtained in birth history surveys has recently become more important. PPR, the proportion of women with an ith births who continue to an (i+1)th birth during their lifetime is a sensitive indicator of changes in family-building process which follow the adoption of contraception. PPR can be obtained through birth interval or birth order data. In the present study the declining fertility change in Uttar Pradesh the most populous state of India is studied by using parity progression ratios through birth order data. The data for the analysis has been taken from all rounds of NFHS in India. Findings reveal that after parity two there is declining trend in the fertility of Uttar Pradesh Females. Still the females live in the traditional society like Uttar Pradesh believed in two child norm.

P1916

Choice of Family Planning in South Asia: Where We Are?

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Meeting the contraceptive needs and improving the quality of family planning services is continued to be a challenge in south Asia region. A high unmet need is still a reality. If clients are well informed about the side effects and problems associated with contraceptive methods, they will be in a better position to make an informed choice. We examine level and trend of family planning scenario in South Asia region and investigated whether there has been enough informed choice for family planning methods.

We used data from Demographic and Health Survey (DHS) conducted between 1990 and 2007 in four South Asian Countries-Bangladesh, India Nepal and Pakistan. DHS asked the current users who adopted selected modern female methods whether they were:

- informed about the possible side effects they might have with method
- informed what to do if they experienced side effects
- told about other methods they could use

Informed choice is analyzed by selected socio-economic characteristics from women and household data using descriptive statistics.

Trends of modern CPR over the past 15 years in South Asia are not encouraging. Nepal, Bangladesh and India have made over 10% point progress (36% in early 1990s to 44%-48% in 2005-07). Notably, Pakistan began with quite lower modern CPR and is still at substantially low level (11% in 1990 and 22% in 2007). There is one or another dominant method of family planning in most of the countries in this region: female sterilization in India, pill in Bangladesh and condom and female sterilization in Pakistan.

Only 25% in users India, 38% in Pakistan and almost half in Nepal were ever informed by a health or family planning worker about other methods they could use. Only one-third of users in India and Pakistan and 55% in Nepal were informed about the side effects or problems of their method at the time of adoption of the method. Even less were informed what to do if they experienced side effects. Informed choice significantly differs by method use, source of information and socio-economic characteristics of users. Informed choice was consistently lower among poor and rural users. Those who obtained their method from NGOs were somewhat more likely to have informed choice than users of public/private sources.

Finding of our study that informed choice of family planning is limited particular among marginalized section of society calls urgent attention. Men and women irrespective of their socio-economic characteristics should be provided full basket of contraceptives as per their choice to meet their reproductive intentions. There is an urgent need to provide an enabling environment to ensure client's rights and choice by involving various stakeholders with the Governments to design and implement effective strategies to improvise informed choice.

P1917

Acute Respiratory Infection among Children in India: Does the Type of Cooking Fuel Matters

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Acute Respiratory Infection (ARI) is a second most cause of morbidity and mortality among children in developing country. About 73% under-five deaths account annually by six causes, however ARI contributed 17% of all deaths. To achieve Millennium Development Goals of reducing under-five mortality by two third by 2015, a systematic research is needed to understand the dynamics of ARI prevalence among children.

The study attempts to analyze the association between qualities of cooking fuels with the incidence of Acute Respiratory Infections among children under age five.

Present study used data from third wave of Districts Level Household Survey (DLHS)-2008. Bivariate and Binary Logistic Regression techniques used to examine the association between type of fuel used and ARI prevalence. The information of ARI has obtained using two questions; has been ill with cough at any time in the last two weeks and difficulty in breathing preceding the survey.

About 12% of children under age five in the India suffered from ARI during the reference period. The proportion of children suffering from ARI varied across regions as well as by the selected socio-economic characteristics. In western region reportedly suffered from ARI followed by central region. In contrast, less proportion of children in eastern and western regions reportedly suffered from ARI.

The analysis suggests that children living in rural areas are more affected by ARI than urban counterparts. Mother's education negatively associated with ARI prevalence among children. The prevalence rate of ARI is high among children living in semi pucca houses. Availability of separate kitchen in the house and clean fuels used significantly reducing ARI among children.

Nationwide plans have succeeded in reducing fatality of respiratory diseases to certain extent. However, a great need of improvement and effective area-specific health program for overall social and economic development is mandatory in rural areas to achieve the desired goal.

P1918

A Methodological Innovation to Study HIV Vulnerability among Urban Youth: A Sequential Analysis of Critical Events

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Risky sexual behavior and substance abuse, most dreaded challenges for youth, together can do serious health havoc, thus, making it critical to perceptively gauge their combined effect. Nevertheless, such sensitive issues need innovative approaches beyond contemporary KAP methodologies. This paper aims to study combined effect of alcohol, sexual-experimentation and unprotected-sex through first ever analyzing 'concept of critical events' in India. Critical event is defined with combination of partner type, alcohol use and un/protected sex in last six months focusing at context and sequence of events. Basic data used has been collected from a randomized cluster sample of 1239 men age 18-29 from low income slums of Mumbai.

Over three-fourths respondents engaged in critical events, four-fifths of which were unprotected, highlighting wide-spread sexual experimentation especially with girlfriend(s). Infact, girlfriend(s) can be emphasized more risky partner as perceived faithfulness translates into unprotected sex (66%), which further falls six times after alcohol intoxication. Partner-mixing in critical event was rampant and perceived safety shaped the behavior. Men reported to use alcohol to improve sexual experience. Men reporting sex with other-women were 8 and 3 times more likely to mix alcohol-sex and unprotected sex. Further, they are three times more likely to indulge in risky sexual behaviour under the effect of alcohol and alcohol use before sex has significantly strong association with type of sexual partner in the last critical event. Peer pressure is influential as one-third of young men engaging in three or more peer activities reported sex with girlfriend and one-tenth reported sex with 'sex worker' in their last critical event. Contextual variables like *exposure to mass media*, pornography, *sexual stimuli* and *alcohol* ($p<0.001$), leisure time activities with friends and alcohol use before sex ($p<0.001$) and pattern of drinking ($p<0.05$) are significantly associated with type of sexual partners, while, *hyper masculinity* is associated with ($p<0.10$) the variation in the type of sexual partner in the last critical event. The multinomial logistic regression shows that relative risk (RR) of having the last critical event with girl friend as compared to wife is 2.2 and 6.9 times higher among those among those had medium and high sexual stimuli exposure. Similarly, the RR to have last critical event with other women as compared to wife are 2.9 and 7.4 times higher among those exposed to medium and high levels of sexual stimuli. Also, RR of having sex with girlfriend as compared to wife is 11.6 times more among peoples who have three or more activities with friends.

Findings provide evidence base that addressing alcohol-sex interface with reinforcing condom-use especially girlfriend is crucial. Dealing with such stigmatized issues, needs multi-level targeted interventions. Study underlines the inevitability of using innovative methodology to expose convoluted susceptible sexuality issues.

P1919

Assessing "Community" in Los Angeles: Incorporating Public Space and Routine Activities into Investigations of Racial and Ethnic Segregation

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Racial and ethnic segregation is typically assessed by examining residential segregation, or the extent to which race/ethnic groups are sorted into different neighborhoods. In this view, more integrated neighborhoods (conventionally operationalized as census tracts) are assumed to be associated with increased overlap in activity spaces and enhanced interaction potential among residents. We examine the extent to which higher levels of residential integration by race/ethnicity lead to corresponding increases in the extent of "community" integration. We define community ecologically - i.e, the extent of overlap in the routine activity locations of neighborhood residents. Using data on the locations of several routine activities (work, shopping, church, relatives homes, etc.) provided by Los Angeles Family and Neighborhood Survey (L.A.FANS) respondents, we construct actor by location affiliation networks for 65 sampled census tracts. Exponential random graph models (ERGMs) are fit to the resulting 65 networks to determine the extent to which actors of different races/ethnicities share activity locations (defined as the census block groups of activity locations) within the network. We then employ multilevel modeling techniques to determine the extent to which residential race/ethnic integration increases the probability of heterophilous activity location ties and the conditions under which residential integration will exert more pronounced effects on this outcome. For instance, neighborhoods with higher levels of social cohesion may amplify the effects of residential integration on community integration by race/ethnicity. Results of these analyses will shed light on the accuracy of assumptions embedded in a long history of residential segregation research in the social sciences.

P1920

Linkages between Urbanization and Obesity: A Comparative Study of Women Living in India and Bangladesh

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Current piece of research tries to understand the impact of female place of residence on their nutritional status in two bordering countries namely India and Bangladesh. National Family Health Survey (2005-06) data for India and Demographic health survey data for Bangladesh (2006-07) are used to carry out this study. Age-stratified regression analyses are carried out which gives the in-depth picture of obesity among different age group of women. Preliminary analysis shows that urban residence is one of the important demographic factors that were strongly related to body weight after controlling important factors like women education, SLI and calorie food intake across all age groups. The age-stratified regression analysis explore that impact of urban residence on obesity is more pronounced in younger women rather than older women and women who have undergone for sterilization were found to be significantly more obese as compare to their counterparts.

P1921

Socio-economic Inequality and Prevalence of Under- and Overnutrition among Indian Women

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There is a growing concern about co-existence of under-and over nutrition in the developing countries especially in India. Literature suggests that the combination of under- and over nutrition during adulthood is primarily responsible for increase in the risks of obesity, type II diabetes and cardiovascular disease during later stage of life. The main objective of this paper is to compare the prevalence of under-and over nutrition between aged 15-49 years old women of India using two rounds of surveys. An attempt has also been made to find out the contribution of different socio-economic factors particularly wealth index in explaining the change in the nutritional status of women during six year time period. Women who were pregnant at the time of the survey and who had given births during the two month preceding the survey were excluded from the analysis. Body mass index is categorized into three categories namely-mal-nourished (BMI<18.5), normal (BMI>=18.5 and <25.0) and obese/over-weight (BMI>=25.0). For the analysis purpose, we have run the separate logistic regression analysis taking normal versus under nourished and then normal versus over nourished. Further, we have employed multivariate decomposition of logistic regression analysis to find out the contribution of wealth index. The selected covariates are region of residence, place of residence, religion, caste, education, household size, age-group, parity and wealth index. The decline in the underweight has been mainly explained by wealth index. Only top three categories of wealth index contributed equally in declining the underweight whereas increase in the overweight was shared by all the categories of wealth index as compared to poorest category. Decline in underweight is more concentrated in the top three categories of wealth index whereas in the case of overweight, richer and middle group was more prone to overweight followed by poorer and richest category. It is evident from the decomposition analysis that the foremost component of increase in overweight is change in propensity, which explains around 67 percent of the total increase. Around 42 percent of the overall increase is being explained by change in composition. Further, around 88 percent contribution in decline the underweight is explained by wealth index only whereas it contributes only 25 percent in case of increase in the overweight.

P1922

Analyzing the Relationship between Age Dynamics and Economic Growth in Nepal

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Relationship between age structure of population and economic growth has been an issue of debate in economic demography discourse. Using the time series data from 1965 to 2005 this study examines the relationship between age structural change and economic growth, measured by growth in GDP, of Nepal. For estimating the relationship, population is classified into five broad age groups - 0-14, 15-24, 25-49, 50-64 and 65+- based on the life cycle hypothesis and human capital theory. Applying ADF test the time series are found to be stationary of order two except in case of log of population aged 0-14, which is found be stationary in level itself. Johansen cointegration test supports to have long run relationship between GDP and population in the five different age groups. However, the regression analysis shows a mixed result. When the analysis is done for the whole sampled year (1965-2005) not significant relationship is observed between age structural change and GDP. However, when sampled years are divided into two periods - 1965 to 1980 and 1981-2005- representing the pre-economic reform and reform period, a significant relationship for 15-24 (β=-37.79, p

P1923

Study of Unmet Need for Family Planning among Slum and Non-Slum Dwellers in India

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The concept of unmet need points to the gap between some women's reproductive intensions and their contraceptive behaviour. It is a challenge to family planning programmes, to reach and serve these millions of women. There is little knowledge about reproductive behaviour and family planning utilization in the urban slums in India. To achieve the goal achieving the replacement level of fertility by 2010, it is imperative to understand the determinants of family planning practice for the people who are living in slum. The objectives of this is to estimate the prevalence of unmet need for Family Planning among currently married women of reproductive age and determinants of unmet need for Family Planning residing at urban slums in India. This study utilizes the third round of National Family Health Survey (NFHS-3); first time has collected data from statistically representative of slums in India. Bivariate, Pearson's chi-square test and multivariate techniques has been used to understand the unmet need for family planning among currently married women living in slums and non slums. The prevalence of unmet need for Family Planning was found to be 12.6 recent in slum and 6.3 percent in non-slum respectively. The significant association of unmet for family planning in non-slum was lower compare to slum areas. One an important result was found non-nuclear family had more unmet need for family planning as compare to nuclear family.

P1924

Gender Differences in Migration in Nepal: Role of Education and Distance

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This study examines the role of education in producing differential migration patterns by gender. Utilizing data from two rounds of the Nepal Living Standards Survey (NLSS), I compare young men's and young women's migration to different destinations within and outside the country between 1996/97 and 2003/04. For both young men and women, having a higher level of education increases the likelihood of long-distance migration but not short-distance migration, suggesting that returns to education in the labor market are not evenly distributed across the country. This effect, however, is much stronger for young women, suggesting that education provides resources for young women to migrate to areas where they may get higher rewards for their qualifications and probably have fewer restrictions on non-family employment. Additionally, educated young men still choose to migrate long distance domestically rather than internationally, indicating that risks and costs associated with international migration are not offset just by individuals' education. These results together show youths' migration to areas with the highest return to education, and the gender differences in the spatial distribution of these returns.

P1925

Inequality of Fertility among Buddhist and Muslim Women: Evidences from the 2003 Reproductive Health Survey in the Southern

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To compare the inequality of total fertility rate (TFR) between Buddhist and Muslim women in Thailand.

Fertility by economic strata of Buddhist and Muslim women was measured by using the data from the 2003 Reproductive Health Survey in the southern. The wealth index calculated from household assets by using the Principal Component Analysis (PCA) technique was used to measure economic status. The TFR was estimated using P-F ratio indirect method. The differences of TFR in terms of absolute and relative measures were used to compare inequality.

By average, TFRs in 2003 of Buddhist and Muslim women in the South were 1.7 and 3.2 respectively. The differences of TFRs between the poorest and richest were 0.2 for Buddhist and 0.4 for Muslim while the concentration index (CI) was -0.023 (95% confidence interval (CI) -0.046 - -0.001) for Buddhist and -0.035 (95% CI -0.104 - 0.034).

The TFR of Muslim women was still high comparing to Buddhist. These findings confirmed that the inequality of TFR was existed among Buddhist and Muslim women of the South of Thailand.

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Development and Validation of a Locomotor Disability Scale in Bangladesh

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Bangladesh has an estimated 17.8 million adults with disabilities. A large proportion (27.8 to 43%) of them has physical disabilities; however Bangladesh lacks a reliable and valid measure of locomotor disabilities.

The aim of this research is to develop and validate a disability measurement scale for adults with locomotor disabilities in Bangladesh, which would be useful in evaluating rehabilitation outcome and screening of locomotor disabilities in the community or out-patient rehabilitation settings.

This study employed a mixed method approach. At first, 25 semi-structured interviews were conducted to develop scale contents, and later, 12 cognitive interviews were done to refine the scale contents. Finally, 358 respondents were interviewed using a structured questionnaire to investigate the underlying factor structure and validity of the scale, and 80 re-interviews were done using the same structured questionnaire to investigate repeatability. The new scale was compared with the Barthel Index and the Timed Up and Go test.
For qualitative part of the study persons with locomotor disabilities (PLDs) were selected purposefully from the Centre for the Rehabilitation of the Paralysed (CRP), Dhaka, Bangladesh. For quantitative part all PLDs that accessed CRP's services between December 2010 & Feb. 2011 were selected. In addition, 42 nondisabled caregivers were selected for the quantitative interviews conveniently.

The majority of our respondents were male (68%), married (59%) and rural resident (65%). Respondents were aged between 18 and 65 years. Qualitative data analysis generated 70 items for the scale under 4 domains: mobility, activities of daily living, work, and leisure activities. After initial descriptive analysis 55 items which had 50% or more response rate were retained for factor analysis.
The exploratory and the confirmatory factor analysis confirmed that there is only one underlying factor (latent variable). This factor is labelled as ‘locomotor disability'. One factor solution produced excellent factor loadings (78% of the items had factor loadings ≥ 0.80 and only 9% had factor loadings < 0.70.
The Locomotor Disability Scale (LDS) showed excellent reliability: internal consistency (Cronbach's alpha: 0.988), item-total correlations (0.108 to 0.952), test-retest reliability (r = 0.998 and Intraclass Correlation Coefficient (ICC) = 0.865) and inter-rater reliability (r = 0.932 and ICC= 0.854). The analysis also confirmed that the LDS has excellent validity. It produced strong negative correlation with the Barthel Index (r=-0.83) and strong positive correlation with the timed up and go test (r=0.522). Furthermore, known groups validation analysis found that the duration of disabling conditions was negatively associated with the LDS after controlling for diagnosis as hypothesised beforehand.

The LDS was found to be a reliable and valid measure of locomotor disability. The LDS is expected to be useful in evaluation of rehabilitation outcome and screening of locomotor disabilities in the community.