

Poster presentation

Recent Decline in Fertility in India and its Major States: A Decomposition Analysis

Ravendra Sharma¹, Manju Rani¹ and Arvind Pandey²

¹ Regional Medical Research Centre for Tribals, Indian Council of Medical Research, Jabalpur, India; ² National Institute of Medical Statistics, ICMR, New Delhi, India
e-mail address: ¹ ravendra_s@yahoo.com

The main objective of this study is to examine the pattern of decline in Indian fertility and also to decompose the total decline in fertility into its important components. The Bongaarts supply-demand framework is used to study the decline in total fertility. The model assumes fertility as a function of three components known as wanted fertility (Fw), natural fertility (Fn) and index of preference implementation (Ip). The index of preference implementation quantifies the role of the family planning programme. A technique suggested by Das Gupta (1991) for the decomposition of a rate, where rate is a function of three components, has been used to find out the contribution of each aforesaid component in the fertility decline. However, to overcome the problem of internal consistency in the comparison of three populations (here three rounds of NFHS survey), a correction factor is used to acquire the uncorrelated effect of each component.

Data for the analyses has been taken from the three rounds of National Family and Health Survey (NFHS). The NFHS survey was conducted in 1992-93 (round-I), 1998-99 (round-II) and recently, in 2005-06 (round-III), and it covers almost the whole country. The main objectives of the NFHS surveys were to provide state and national estimates of fertility, practice of family planning, infant and child mortality, and the utilization of health services provided to mothers and children. The total fertility rate (TFR) of India has declined to 2.68 in 2005-06 from 2.85 in 1998-99 and 3.39 in 1992-93, and a similar trend of decline was observed in both rural and urban areas. Thus, the total fertility rate has declined by 0.71 points during NFHS-1 (1992-93) and NFHS-3 (2005-06), and 82.6% of this downturn was due to a decline in wanted fertility (Fw). The Index of preference implementation (Ip), which is a proxy of contraceptive use, contributed to 31.9% of this recession. Natural fertility has slightly increased during the aforesaid period and thus enhanced the TFR by 14.6 percent.

**Analyzing the Impact of Family Planning Programmes in the Philippines:
A Review of the Past Decade (1998-2008)**

Ruzzel Brian Mallari

UP Population Institute, University of the Philippines, Diliman, Philippines
e-mail address: rbrian.mallari@yahoo.com

This paper intends to use the Bongaarts' Prevalence Method in estimating the impact of family planning programmes in the Philippines using recent data. The objectives of this study is to illustrate the trends in the effects of contraceptive services from programme and non-programme sectors on the country's fertility rates; examine the relative contributions of various contraceptive methods in lowering fertility; and finally, present empirical evidence on the contribution of the government's efforts in managing its population. The Prevalence Method developed by John Bongaarts (1986) was used to estimate the levels of natural fertility and potential fertility. Natural fertility is defined as the level of fertility that would prevail in a population when contraception is not present, while on the other hand, potential fertility is defined as the level of fertility that would prevail if all the programme users stopped contraception. Thus, the impact of family planning programmes for programme and non-programme users may be gleaned by looking at the relative differences among these three levels of fertility; such that the fertility impact of contraception is the difference between potential and observed fertility, while fertility impact of non-programme contraception is the difference between natural and potential fertility. Data for fertility indicators were obtained from the National Demographic and Health Surveys of 1998, 2003, 2008 while population parameters used corresponding years in the Census of Population.

Socio-Cultural Determinants of Iran's Fertility Transition

Yaghoob Foroutan¹ and Masoumeh Haghpanah

University of Mazandaran, Babolsar, Iran

E-mail address: ¹ y_foroutan@yahoo.com

This paper presents empirical evidence to explain the key determinants associated with fertility transition. The main focus, however, will be on socio-cultural determinants. In particular, the present study also focuses on religion, as a major determinant in studies of differential fertility (McQuillan 2004). The evidence of this study is obtained from the exceptional experience of fertility transition of Iran placed in South-western Asia. The country has experienced one of the world's most spectacular falls in fertility rate ever experienced in human history (McDonald 2005). In addition, facing fundamental socio-cultural changes over the past decades has made the country as a unique social laboratory to survey their demographic consequences such as fertility trends. This paper uses both qualitative study based on content analysis method, and quantitative research based on a survey and secondary data analysis. In accordance with Sauvey's (1978) and Weeks's (1994) studies in other Asian countries such as India, Malaysia, Singapore and Taiwan, the results of this study present new evidence to emphasize the vital role of culture and religion on fertility transition. The results also show that social trends tend to moderate the effect of religion on fertility transition in more recent years.

Theme 10: Environment and Population

The Economic Impact of Tsunami in Aceh – Indonesia

Ardi Adji¹ and Sri H. Rachmad

BPS Statistics, Indonesia

e-mail address: ¹ardiadji@bps.go.id

The aim of this paper is to analyze cross-border economic linkages that is the intra-inter regional economic linkages of Aceh Province prior to and during the post Tsunami reconstruction and recovery period. The economic destruction caused by the earthquake and tsunami had a massive impact on Acehnese welfare. In this connection, it is crucial to observe and measure economic development in terms of infrastructure development and economic integration in three main regions, namely Selat Malaka, Lautan Hindia and Gayo Alas Singkil. As consequent that Indonesia is consist of four regions, namely Ladiagalasska (Indian Ocean, Gayo Alas Singkil and the Malacca Strait) and Roi (Rest of Indonesia). The research methodology applied the Multiregional Input-Output (MRIO) in term to set up MRIO NAD 2002 and 2006. Findings show that trading among regions has decreased dramatically in the post Tsunami period , followed by volatility of production in the economic sectors of Aceh due to the destruction of infrastructure such as transportation between regions and central industries.

**Household Environment and its Effect on Women's Health in India:
Evidence from NFHS-3 (2005-06)**

Ashok Kumar¹ and Ravendra K Sharma

International Institute for Population Sciences, Mumbai, India

e-mail address: ¹ashok_iips@yahoo.com

Household environment is very crucial not only for physical development but also for psychological and social behaviour. Women play a vital role in the promotion of household environmental behaviour in the residential setting; however, they are the most affected victims of this environment. This paper tries to explore the possible effects of household environment on women's health in India. Specifically, the objectives of the study were: (1) to examine the health status of women using indices such as BMI, anaemia, height and weight; (2) to examine the pollution in the home by selected background characteristics; (3) to study the stress levels of women by different background characteristics. The study used data from National Family Health Survey III (NFHS-3), 2005-06. In India, NFHS-3 collected information from 109,041 households and 124,385 eligible women aged 15-49 years. Information was gathered on various household environment proxies, such as type of house, household crowding, type of fuel used for cooking, sources of lighting, defecation facilities etc. NFHS-3 also provides valuable information on women's health indicators, such as nutrition status, BMI index, reproductive health, etc. Analyses show that women are at a greater risk in small and low economic households. Some of the household environmental factors affecting women's health are household crowding, type of house and source of water. The effect of various socio-economic and household variables was also controlled in the analyses.

NFHS-3 has played a pioneering role by expanding the demographic and health survey beyond environmental demographic variables to estimates of the nutritional status of the population. NFHS data on the prevalence of iron deficiency, anaemia and malnutrition in the country as a whole clearly indicate that the latter two conditions are of severe grade among public health problems, as the prevalence of both conditions in the population was more than 40 percent. NFHS-3 data have brought out very clearly that a large section of women in their reproductive phase face the gravest disadvantage of the risks involved in reproduction as they go through this important phase of life in a state of iron deficiency and malnutrition, which will increase the range of untoward outcomes. Inadequate access to food, poor environmental sanitation and inaccessible health care and adversities further aggravate their plight.

The results of this study provide empirical evidence of linkages between different household environmental factors. From a policy point of view, results suggest that personal hygiene behaviours, poverty and governmental policies and programmes affected women's health to a substantial extent. Dumping refuse in living areas reflects lack of awareness of hygiene. Crowded and poor housing, lack of separate space for cattle and kitchen require focused attention in government policies and programmes. This study also demonstrates that personal practices could significantly reduce women's health problem. Hence, it concludes that specific information on hygiene should be disseminated to motivate people to bring about changes in their behaviour and habits.

Print Media and Climate Change in Bangladesh: Missing Health Issue

Md. Aminul Haque¹ and Ahmed M²

¹Institute of Public Health, Heidelberg University, Germany;

^{1,2}Department of Population Sciences, University of Dhaka, Bangladesh

e-mail address: ¹aminuldps@gmail.com

In the context of the recent climate change scenario, Bangladesh is in a very vulnerable situation in all respects. Government and other stakeholders are concerned about the upcoming danger to the country caused by climate change. The print media, as an important agent of change for any society, has taken up the issue; Bangladeshi media are always vibrant in shaping and pushing national issues forward. Hence, in this article, we have analyzed the role of the print media in highlighting the climate change issues of the country. Specifically, the objective is to describe how the media has exposed climate change and its impact in Bangladesh.

Published daily news/reports were collected from 14 Bengali and 7 English newspapers for two months from 20 September to 20 November 2009, and subjected to content analysis. Results indicated that a total of 117 reports on various issues related to climate change in Bangladesh had been published during the two-month study period. On an average, two reports were printed every day by these daily newspapers. Seventy seven percent of the reports covered meetings of the Prime Minister or Ministers at home and abroad. The remaining 23% involved coverage of UN organizations and NGO activities, civil society movements and articles by climate experts of the country. Messages about climate change, CO₂ emission, ozone layer depletion, global warming, sea level rise, inundation of southern part of Bangladesh, emergence of huge numbers of climate refugees, and reduction in food production were highlighted in the reports. The health burden and incidence of diseases have not been covered in the reports as this has been missing in the speeches of the heads of state and other stakeholders. That climatic variability has a deep impact on health should be within the focus of the print media. Heat, contamination of water, shortage of water, increased salinity, shortage of food, and tidal surge also have a huge impact on the health of people. Hence, the issue of health is yet to be focused. The print media, therefore, has a lot to do in terms of highlighting the impact of climate change on health in Bangladesh. Up to now, as a powerful stakeholder, the print media has placed climate change issues as much as possible, before the people of Bangladesh. But, it needs to reach international communities, developed countries and UN bodies. The media can do independent research, organize roundtable meetings with development partners and UN bodies, and can highlight the extent of damages. To conclude, coverage of climate change by way of reports is not enough; the print media needs to act as an active and powerful actor for the affected people and Bangladesh. None of the daily newspapers has done any independent research on climate change and its impact in Bangladesh. Special issues on climate, editorials, roundtable meetings with experts seem to be missing in the newspapers studied. Thus, there is no strategic reporting on how Bangladesh should go forward in managing this danger.

Human Migration and Environment: A Case Study of Hyderabad, India

MSR Murthy

Department of Population Studies, Sri Venkateswara University, Tirupati, India

e-mail address: mocherla_s@rediffmail.com

Hyderabad is a city with the cultures of south and north India. Over the years, it has grown due to its special culture of Muslim and Hindu traditions. Further, due to the vastness of its area, it has grown in different directions. Over time, the climate has been changing from a salubrious one to a hot one. Roads and buildings and increased vehicular traffic have affected the environment of Hyderabad. Muslims, who were hitherto living in the crowded old city, have started moving out to the outer fringes of the city due to 'Gulf money'. Private vehicles have gone up astronomically increasing traffic congestion, and pollutants of different varieties such as particulate matter, sulphur dioxide, nitrous oxides and biogas emissions have increased in the city. Water pollution too has been on the increase, and outbreaks of water-borne diseases such as cholera and jaundice are common; so is the mosquito menace. Nowadays, non-communicable diseases are also on the increase owing to changed lifestyles of people. Further, the city has also become a hub of information technology. This has pushed the real estate sector to higher levels. Along with it, food and recreational facilities have increased. All this has added to the congestion and warming of the entire Hyderabad city. Now plans are afoot to control greenhouse gases with the introduction of a rapid transport system and CNG vehicles. However, much is needed so as to encourage people to walk or use of cycles.

Population, Poverty and Perpetuity: Case study on Bangladesh Environmental Policy

Mohammad Ali

North South University, Dhaka, Bangladesh

e-mail address: ifescu@yahoo.com

This paper reviews issues of environmental policy responses for dealing with the extreme situations of population, poverty and perpetuity of resources in Bangladesh. A longitudinal profile on status of environmental regulations and administrative measures has been developed and compared with the present horizontal pattern of public responses to environmental policy. The comparatives are then analyzed to address the issues of public awareness and burden of resource shortage. The paper then briefly reviews the main flaws in public policy options with application to sustainable resource management. The key policy issues are considered to the extent to which the burden of resource shortage should be spread out over present and future generations. The perspective of future generations is outlined emphasizing how we value the well-being of future generations relative to proneness of Bangladesh to climate change situations. Future projections of resource availability and the rate at which our subjective sense of well-being improves with our living standards are also highlighted. The paper discusses several policies to shift the burden of resource shortages from the public to private sectors.

Upland Family, Unmet Need for FP and the MDGs

Celso Espaldon¹ and Ma. Victoria O. Espaldon

Tubig Kanlungan Foundation, Inc., Laguna, Philippines

e-mail address: ¹lekspaldon@yahoo.com

In 2000, the Philippines joined the United Nations in facing the challenge of the millennium and set for itself its Millennium Development Goals (MDGs). With a huge population, battered by calamities, governed by questionable leadership, and influenced by a ultra-traditional church, efforts to achieve the MDGs are hardly felt,; worse, hardly articulated among its population. The goals remain and the evidence indicates that the country may not be able to achieve especially MDG #2 (Universal Primary Education) and MDG #5 (Improve Maternal Health). This descriptive/qualitative case study aims to: (1) present a socio-economic case of a upland charcoal making family in Laguna, Philippines; (2) present the Millennium Development Goals set by the Philippines; and (3) compare and assess how achieving the MDGs is expressed in the context of the upland charcoal making family. The study reveals and concurs with the reservation or concern cited by the UNFPA that an unmet need for family planning undermines achievement of several MDGs. Results of the study serve as a wake up call to decision and policy makers of national line agencies, civil society, the private sector and local government units. This paper was part of the baseline research conducted by Tubig Kanlungan Foundation, Inc for the indie film Basa ang Chalk (Even if the Chalk is Soaked) which won Honorable Mention at the 2009 Cine Indie for the MDGs National Short Film Competition in the Philippines.

**What Evokes Concern for Child Health in the Sunderbans:
How far can Status be Attributed to Adverse Environmental Impacts**

Papiya Mazumdar¹, Barun Kanjilal and Moumita Mukherjee
Institute of Health Management Research, Kolkata, India
e-mail address: ¹papiyamaz@gmail.com

The Sunderbans, one of the world's largest mangrove forest lands located in India, and stretching over neighbouring Bangladesh, was once again up for discussion in mid-2009 when the devastating cyclone Aila struck the land causing losses to many lives. The Sunderbans is frequented by environmental shocks that are believed to have strong linkages with the worldwide climate change. It marks one of the earliest evidence of climate-refugees in India due to the submergence of inhabited islands resulting from a rise in the sea-level. While, there is a lot of general concern for the land and people of the Sunderbans, systematic evidence reflecting the extent of difficulties posed by the land is scarce. With a specific focus on child health, this paper attempts to cull out existing differences in health outcomes of children living within and at neighboring locations of the Sunderbans. It tries to bring to light the discussion on how far these differences can be attributed to the land of Sunderbans.

The major data sources for the paper were primary household survey data collected from representative samples in the Sundarbans during 2009, the recent round of DLHS-RCH-3 data on the two districts of West Bengal State that is, North and South 24 Parganas, which share a part with the Sunderbans. Additionally, the NFHS-3 is used to picture the average scenario in the state. Suitable bivariate and multivariate analysis are parsimoniously employed to bring out differences.

Findings indicate that children seem to share a higher burden of ill-health in the Sunderbans compared to the overall scenario depicted by the districts and the state at large. Children's health, including their long-term nutritional status, was found to be much adversely affected in households that reportedly had experienced frequent damages due to climatic shocks. To conclude, special attention is needed to make a shield against environmental shocks in the Sunderbans, to address the adverse health status among children. The issue of child health is intertwined with many other household, livelihood and other socio-economic aspects; hence, attempts will not give any sustainable results if they solely focus on enhancing child health outcomes.

Economic Inequality and Double Burden of Nutritional Status among Indian Women: Revisiting the Rich-Poor Gap

Deepti Singh¹, Srinivas Goli² and P. Arokiasamy

International Institute for Population Sciences (IIPS), Mumbai, India

e-mail address: ¹dsingh.singh87@gmail.com

The last decade has witnessed a rise in inequality of household income , in both rural and urban areas of India. At the all-India level, the Gini coefficient has moved up from 0.43 (1995-96) to 0.45 (2004-05). There is a huge gap in purchasing power and nutritional status between the states of India as well as among population sub-groups within each state.

This study uses data from the recent NFHS-3 to estimate poverty and nutritional status in India. Multiple classification analysis and multinomial logistic regression have been employed to examine the effect of economic inequality on the double burden of nutritional status.

It is evident from the results that neither the rich nor the poor are nutritionally balanced — while the well-off suffer from over-nutrition, the deprived suffer from under nutrition. Findings clearly establish that the prevailing gap between the richest and the poorest is a critical determinant of the double burden of nutritional status in India.

Millennium Development Goals: Achievement and Challenges in Bangladesh

Sadananda Mitra¹ and Tandra Majumder²

¹Independent Consultant, Bangladesh, ²Gandharv Mahavidyalaya, New Delhi, India

e-mail address: ¹mitra2kbd@yahoo.com

Bangladesh has been continuously monitoring the Millennium Development Goals (MDGs) by tracking the current status of MDG indicators. The current trend indeed indicates progress as Bangladesh is well on track in achieving the MDG targets in the areas of hunger, net enrolment in primary education, gender parity in primary and secondary education, reducing child mortality and improving immunization coverage, rolling back malaria and controlling tuberculosis, and improved drinking water supply. Apart from these achievements, areas in need of attention are poverty reduction and employment generation, increase in the primary school completion and adult literacy rates, creation of more wage employment for women, reduction of the maternal mortality ratio and increase in the presence of skilled health professionals at delivery, increase in correct and comprehensive knowledge of HIV/AIDS, increase in forest coverage and coverage of information and communication technology. Although the country will achieve Goal Four as a whole, there are some pockets where attention needs to be paid in order to transmit the benefits of the reduction in child mortality uniformly across the country. Bangladesh's maternal mortality ratio has almost stalled over the last decade.. Rapidly increasing the proportion of skilled births attendants (SBA) in dealing with delivery cases can improve the maternal health situation. However, the number of SBAs is still very inadequate for conducting safe deliveries; so, in order to meet the MDG target, a substantial increase in the number of trained health personnel is necessary. The HIV prevalence rate is still below the epidemic stage. However, the epidemic status of the high risk group, the intravenous drug users (IDUs), is a matter of concern. The low level of correct knowledge of HIV among youth and the low condom use rate put the country at some vulnerability. There needs to be a comprehensive advocacy programme through the mass and electronic media with the involvement of private partners and the community. There are a large number of malaria cases in the country and the incidence of malaria is increasing. A huge number of tuberculosis cases are also diagnosed every year. Therefore, there is a need to ensure universal accessibility to modern treatment, especially in the remote areas of the country and for marginal populations, improvements in the quality of diagnostic services, treatment for multiple drug resistant cases and so on. In this context, the recent success of the DOTS programme in Bangladesh will surely facilitate the control of tuberculosis and deaths resulting from it.

Poverty Dynamics in Mongolia

Enkhtsetseg Byambaa

Population Teaching and Research Center (PTRC), School of Economic Studies,
National University of Mongolia, Ulaanbaatar, Mongolia
e-mail address: enkh@rocketmail.com

The paper first reviews the socio-economic development of Mongolia, and provides an account of recent economic performance and social outcomes given in terms of progress towards the Millennium Development Goals. Second, it provides an up-to-date poverty and inequality profile which reports the latest poverty data and the results of analyses to track patterns and changes in incidence. Third, it focuses on the key issues to be addressed, and closes with a summary, conclusion and recommendations.

Since the transition from socialism in 1992, Mongolia has made significant economic progress. Although, the economy has performed well, a large proportion of the Mongolian population lives below the poverty line. According to the most recent Household Socio-Economic Survey (HSES) 2007-2008, 928,600 people live below the poverty line of MNT 62494¹. During the last 15 years of transformation, the percentage of population living under the national poverty line has been relatively constant: it was 36.3% in 1995, 36.1% in 2002/2003 and saw a modest decline to 35.2% in 2007/2008. Inequality, in addition to being a concern in its own right, is central to determining the level of poverty reduction, since inequality determines relative increases in income received at different points of the distribution. Inequality worsened over time in Mongolia; the Gini Coefficient rose from 0.33 in 2002/2003 to 0.36 in 2007/2008.

A participatory poverty rapid assessment, conducted in 2008 by the researchers of PTRC, focused on the key issues and emerging constraints affecting the poor in Mongolia today. In order to systematically collect the relevant qualitative data, participatory tools and methods such as focus group discussion and case study, key informant interview guides, flow diagrams, classification, mapping, diagrams, institutional analyses and matrix were used as data gathering tools depending on the key areas/questions.

The study highlights several important dynamics of poverty: (1) rising inequality – despite the overall strong growth in the country, this has not translated into higher levels of poverty reduction; (2) worsening spatial inequalities – although the decline in poverty rate is highest in Ulaanbaatar, this is accompanied by significant worsening in equality and large deteriorations in the distribution within soum and countryside areas; (3) high reliance on social welfare benefits by the poor for meeting basic needs and for day-to-day survival; (4) difficulty in paying for school expenses – significant expenditures for school materials, uniforms and living expenses, especially at the secondary and higher education levels, and (5) poor infrastructure and access to basic services such as water in urban areas – rapid urban growth primarily in *ger* areas combined with significant insufficient attention to pro-poor urban development has led to sustained lack of basic services such as water and sanitation in *ger* areas.

1 Poverty line is estimated by NSO every year based on food and non food consumption basket per person

Availability, Costs and Affordability of a Healthy Food Basket in New Delhi

Swati Khurana¹, F Taylor, V Tripathy, A Satija,
G Singh, N Khandpur and S Ebrahim

South Asia Network for Chronic Disease
Public Health Foundation of India, New Delhi, India
e-mail address: ¹swati.khurana@phfi.org

Lack of access to healthy food and low purchasing capacity has been linked to poor health outcomes. India is undergoing rapid urbanization and despite prolonged economic growth, food insecurity continues to exist among the urban poor. In 2009-10, while the annual wholesale price inflation was 5-10%, food inflation fluctuated between 16-20%. Data for Delhi indicates that in 2008, while the poor spent 58.5% of their household income on food, those with an average household income spent 46.5%. Against this background, this paper attempts to develop a 'healthy food basket' (HFB) and ascertain its availability, cost and affordability in New Delhi.

Indian Migration Study data were used to define a HFB using the consumption of food items among healthy participants. Allowances were made for different age groups and daily recommended calorific requirements. Ingredients needed for the weekly consumption of a HFB for an average, urban Delhi family of five, were determined. Using the Census of India 2001, we identified and randomly selected a low and a high socio-economic (SE) ward. Food markets in each ward were identified using a snowballing technique. To allow for seasonal variations and price fluctuations, we collected data using a questionnaire, in November 2009 and May 2010. The Mann-Whitney test was used to compare the cost of HFB between wards and the two surveys using STATA 10. Current minimum and average weekly wages for Delhi were used, assuming a family would have two full-time earners.

Four markets were visited in each ward. The weekly HFB contained 75 items and comprised pulses, cereals, vegetables and fruit: the calorie content amounted to 9,630 Kcals/day. Findings indicate that there were no significant differences in availability of food items between the low and high SE wards; markets in November stocked 87-88% of all items and this remained unchanged in May (low SE: $p = 1.00$; high SE: $p = 0.89$). As regards cost, between the time periods, the mean cost of the HFB decreased from Rs. 1,099 to Rs. 1,023 ($p = 0.4$) in the low SE and from Rs. 1,605 to 1456 ($p = 0.13$) in the high SE ward. However, the HFB cost difference between the low and high SE wards was significant for both periods ($p = 0.02$ and $p = 0.002$ respectively). In terms of affordability, the cost of the HFB ranged from 46-67% for those living on a minimum weekly income (Rs. 2,200-2,400) compared to 35-50% for those living on an average weekly income (Rs. 2,780-3,280).

We conclude that a HFB was mostly available in both high and low SE wards but at a higher cost in the high SE ward. Our results confirm previous estimates that a significant proportion of the weekly income is required to afford a healthy diet in India; the worst affected are the poor.

Educational Attainment by Socio-Religious Communities in India: Evidences from National Family Health Survey and Some Implications

Madhusdan JV¹, Jitenkumar Singh, and Jeetendra Yadav

North-Eastern Hill University, Shillong, India

e-mail address: ¹madhusudanjv@yahoo.co.in

India is party to international pledges of ensuring education as a fundamental human right of every child. The country has made commitments in international forums, most notably since Jomtien in 1990, that necessary policies, plans and programmes will be put in place and resources will be mobilized to see that the time-bound MDG and EFA targets will be achieved. However, inequalities in education in India have remained a serious challenge in their attempts to ensure every child's right to education. Education is a basic right, but in all regions of the world including India, minority and indigenous children are being deprived of a quality education or access to schools at all. The costs of failing to provide quality education for all at various levels are massive, holding back economic growth and potentially sowing the seeds for conflicts. Therefore, there is an urgent need to address inequalities in education and especially the needs of minority and indigenous peoples. Study of educational attainment by different socio-religious categories in India and elsewhere will have important implications for educational policies and for research on the linkage between education and social exclusion.

Keeping this in mind an effort is made to understand the trends in primary schooling among Muslims (minorities) in comparison with the Hindus (Majorities) in the major states in India. For this purpose the education data from three rounds of National Family Health Survey pertaining to years 1993-1994, 1998-2000 and 2005-2006 is used. The major aim of the present analysis is to estimate the trends in primary school attendance and enrollment, to estimate the trends in drop out rates and to study the relationship between trends of schooling with the deterrents of school attendance. Variables considered for analysis are percentage never attended, percentage attended, drop out ratio, gross enrollment ratio, and net enrolment ratio. Individual level factors considered for analysis are age, sex, religion and place of residence. Household level factors considered for analysis are standard of living index, availability of electricity, type of house, sex of the household head. The analysis uses the cross tabulation and logistic regression to estimate the effect of predictor variables on educational attainment.

The results indicate a distinct variation in school attendance in two socio-religious groups amongst the sample states. Results also indicate that the age and sex of the children and religion, standard of living index, availability of electricity at household, and type of household remain as important determinants of schooling. The findings lend strong support to the hypothesis that poverty is the root cause of educational inequalities. The paper concludes with recommendations for targeted affirmative actions as a means to increase school attendance and reduce inequalities.

Using DevInfo for Evidence-Based Decision-Making on Human Development Issues

Sameer Thapar

DevInfo Support Group, India

e-mail address: sthapar@devinfo.info

The Millennium Development Goals (MDGs), adopted by all United Nations Member States in 2000, have become a universal framework for development for both developing and transition countries. With only five years left until the 2015 target date, the present data shows that although significant progress has been made across Asia, much still remains to be done for millions of people on the continent to realize the basic promises of the Millennium Declaration.

It is universally recognized that achieving sustainable results at the country level to lift people out of poverty requires adequate financing from the global partnership for development. However, this is possible only if monitoring and evaluation systems – owned by developing and transition countries themselves – can provide relevant, sound and timely data for evidence-based decision making on poverty and development issues.

DevInfo is a database system which harnesses the power of advanced information technology to compile and disseminate data on human development. In particular, the system has been endorsed by the UN Development Group to assist countries in monitoring achievement of the MDGs. DevInfo provides methods to organize, store and display human development data in a uniform way, to facilitate data sharing at the country level across government departments, UN agencies and development partners.

DevInfo has simple and user-friendly features which produce tables, graphs and maps for inclusion in reports, presentations and advocacy materials. The software supports both standard indicators (the MDG indicators) as well as user-defined (country-specific) indicators. DevInfo is compliant with international statistical standards to support open access and widespread data exchange. The software is distributed royalty-free to all Member States for deployment on both desktops and the web. As a result, governments, UN agencies, donors, NGOs and civil society can all use this common database platform to monitor and evaluate country progress on human development, prepare related reports and presentations, and press for evidence-based decision-making on a range of poverty and development issues.

DevInfo is being used as an advocacy platform to engage a broad spectrum of stakeholders in policy choices for human development. Member States and UN agencies across Asia are using DevInfo to help support the reform of development planning policies across multiple sectors, including education, health, demography, and water and sanitation. As of August 2010, a total of 79 DevInfo adaptations had been launched across 27 Asian countries. This number continues to grow, as countries launch new adaptations with updated datasets and additional country-specific indicators.

Regional Planning in Gujarat: Land Allocation of Industries

Shashikant Kumar

Green Eminent Research Centre, Vadodara, India

E-mail address: gercbrd@gmail.com

Gujarat is one of the developed states of India formed by bifurcation of the erstwhile Bombay state, in 1960. Though the state has been traditionally regarded as the hub of trading and manufacturing, especially of textiles and machine tools, it has propelled industrialization by allocating land for industrial development. Recently, the state was able to attract 'Nano', the smallest and cheapest car plant in Asia, near its megapolis, namely Ahmedabad. This paper dwells at length on how state machinery was efficiently and forcibly used to generate an industry-savvy image. The state, in its industrialization policy, guarantees the industry quick and large areas of land, attracting a large number of investors not only from across India but also from Asia. Besides, the proposed DMIC (Delhi-Mumbai Industrial Corridors) passing through the state, proposes to propel the industrial growth incomparable in Asia. How does planning, especially regional planning, for the region affected by such massive development? Why were underdeveloped regions of the state not able to respond to the industrial development in the region? The study examines these issues using state policy measures adopted for industrial development vis-à-vis development of backward regions of the state, and secondary data available for the industrial development of the state including factories, employment, and urbanization characteristics.

Demographic Dynamics and Human Development

Trilochan Pokharel

Central Department of Population Studies, Tribhuvan University, Kathmandu, Nepal

e-mail address: tnpokh2000@yahoo.com

The relationship of demographic dynamics with human development is a new area of research. This paper tries to shed light on the development consequences of four demographic parameters – total fertility rate, natural growth rate, crude death rate and infant mortality rate. Using cross-country, cross-sectional data from 173 countries for the period 2005-2007, a regression model was fitted to determine the causal relationship between these parameters and human development. Collinearity diagnostics indicate that these four predictor variables have multicollinearity. Hence, total fertility rate and crude death rate were dropped from the final regression analysis.

Bivariate scatterplots and smooth line fitting show that total fertility rate and infant mortality rate have a linear negative relationship with human development whereas the natural growth rate has a roughly concave but negative relationship and crude death rate, a roughly convex but negative relationship with human development. Final regression coefficients reveal that both natural growth rate ($\beta = -.025$, $p < 0.01$) and infant mortality rate ($\beta = -.004$, $p < 0.01$) ($R^2 = 0.864$) are significant negative predictors of human development. As argued by earlier research studies, a favourable demographic environment is required to sustain development.

This study confirms that demographic parameters, if not properly managed, can play a negative catalytic role in human development. Hence, countries should pay attention to making their demographic indicators favourable in order to promote and sustain their human development programmes.

Study on Population and Development and their Relationship

Marziye Hajian¹ and Ali Pezhhan²

¹Statistical Centre of Iran, Tehran, Iran;

²Department of Demography, University of Kerala, Thiruvnthapuram, India

e-mail address: ¹marziye_hajian@yahoo.com

Population and development generally refer to the study of the consequences of population trends on socio-economic development, human welfare and the natural environment. Although there is a long tradition of scholarship on the consequences of population trends, beginning with Malthus, contemporary research on population and development lacks a dominant paradigm and a cumulative research tradition. A major strain of the literature, which lies largely outside the corpus of modern demography, adopts a “doomsday scenario” which argues (or assumes) that population growth has highly adverse consequences on human welfare and the natural environment. Economic demographers and other researchers have questioned the logic and evidence offered by the population alarmist school. The revisionist perspective finds generally modest effects of population trends on economic growth in developing countries. I conclude that “middle range” research on tractable research questions might lead to a more productive and cumulative research literature.

Household Size and Composition in Iran

Akbar Aghajanian

Fayetteville State University, NC, USA

e-mail address: aaghajanian@uncfsu.edu

This paper reviews the trends and variations in household composition in Iran, during the last three decades. Iran experienced a rapid fertility decline, a significant increase in age of marriage among females, and a rise in the share of the population living in urban areas during these three decades. Utilizing data from the censuses (1976, 1986, 1996, and 2006), various population surveys, and socioeconomic surveys, the research reported in this paper examines the link between these changes and household composition and size changes. With the significant decline in fertility in Iran, it is expected that the household size will decline, in turn. However, the observed decline in household size has not been as expected. This observation might be explained by other factors affecting household size and composition. The limitation of housing in urban areas and the increasing number of males and females who postpone marriage, may have had a strong impact on the household composition and size. The paper reports on the role of these factors in shaping the trends and variations in household size and composition at the national level and across the provinces.

Marital Instability among Urban Slum Women in Selected Areas of Dhaka City

Md. Rezaul Karim¹, Md. Mahmudul Haque and Md. Rizwnul Karim

National Institute of Preventive and Social Medicine (NIPSOM), Dhaka, Bangladesh

e-mail address: drr_karim@yahoo.com

Twenty percent of the population of Bangladesh lives in urban areas. The lives and livelihoods of the urban poor are subject to a wide range of vulnerabilities and insecurity. The slum society is neither like a village society nor an urban society. The heterogeneity of slum settlements is segmenting and weakening social control. Individuals are becoming more individualistic and familial ties are getting looser. The weakening of familial ties also means that couples are often deprived of kin support when they face any insecurity, leading to marital instability and desertion. After marital disruption, in most cases, women become insecure. There has been a growing concern about the need for development interventions to improve the condition of women. This study on marital disruption due to divorce and abandonment will explore the nature, determinants and effects of changing patterns of marriage, divorce and separation in the urban context. A descriptive type of cross-sectional study on marital instability among the urban slum women in selected areas in Dhaka city was carried out in seven slums of in Dhaka City. Information was collected from 150 slum women whose marriages were disrupted that is, divorced or separated from their family life. Data were collected by using a semi-structured questionnaire and face-to-face interviews. Results revealed that among the 150 respondents, 31 women were divorced and 119 separated. The mean age of the respondents was 31.71 years, ranging from 17 to 48 years. Education wise, 46.7% were illiterate, 22.7% could sign their name, and 15.3% could read Arabic only. All the respondents were Muslim. Among them, 36.0% were garment workers, 30.0% were housemaids, 12.0% were involved in business, 4.7% were day laborers and 2.7% were involved in other income generating activities; 14.7% were unemployed. Marital ages were 15-17 years, 12-14 years and 18-21 years among 53.3%, 35.5% and 11.3% of the women, respectively. Various factors that influence marital disruption were identified. The most important ones were: aspects relating to demands made in the process of marriage, various family problems due to non-fulfillment of demands of dowry, mutual distrust, polygamy (26.6%), extramarital relationship (16.5%), gambling (29.1%), addictions (20.2%), sexual dissatisfaction and husband's deviant behavior. Women who did not have live births from their first pregnancy had a greater risk of separation (66.7%) and divorce (33.3%). Conflicts in family life were at the highest risk of divorce and separation. Among the respondents, 26% women reported conflicts in their family life due to economical reasons, 26% women due to birth of a female child, 15% due to non-payment of dowry, 11% women due to distrust between couples, and 8% due to failure to produce an issue. The study revealed that education of women showed an inverse relationship with the risk of divorce. The findings clearly indicate the need to increase the level of education among both males and females to reduce marital instability.

Palestinian Marriage Patterns: A Comparative Study of Change between Two Population Censuses

Mohammad Al-Duraidi¹ and Haidar Rasheed²

¹ Palestinian Central Bureau of Statistics, Ramallah, Palestine; ² UNFPA, Iraq Office
e-mail address: ¹ mduraidi@pcbs.gov.ps

The study aimed at exploring and examining the changes and variations in Palestinian marriage and its patterns inside the Palestinian community (West Bank and Gaza Strip) as well as tried to study cause and effect through a causality model which was built on socio-economic, cultural and woman's empowerment variables. On another aspect, the study aimed to compare the results from the data of censuses with the results generated earlier from the thematic households surveys which were implemented before and during the period between the two population censuses in Palestine. The study has three concerns (social status, economic and empowerment situations of both the spouses, particularly the young ones), to identify the patterns through implemented bivariate and multivariate analysis for the built causality model which appraises evidence on marriage patterns, including demographic variables such as fertility and women's health. Study findings are noteworthy in that there is a distinct pattern of marriage with four elements contradicting each other: (1) Early marriages of females: that is, below the age of 18, were noted among 33% of females versus 2% of males).The female median age at marriage was 18 years, which means that half of the females marry before this age; (2) Increase in education level of Palestinian females: about 7% hold BA/BSc and 11% college diploma (two years after high school); (3) Inter-marriage (marriages of relatives) is a common phenomenon in the society as we found that 45% of the married females in the age group 15-54 had married a relative (from the same family or same Al-Hamolah, and (4) In the same context, the percentage of spinsters was high, especially at age group 35-54 which constituted 11% of all females in the same age group. The study observed that the low age at first marriage results in the low age at first delivery (first birth), which impacts on relevant services and needs for the newborn and the young parents, particularly young mothers. The other noteworthy evidence is the empowerment of females reflected by the age at first marriage negatively, as females with high school education and above (secondary level and more) married at higher ages suggesting that woman's empowerment plays a significant role in supporting Palestinian women to share in the labor market and achieve their desire of getting more education and take part in decision making about when to marry. But, on the other hand, a contradiction appears which suggests that marriage with relatives among females with high education, especially those with university level is high in the region, which means that women's empowerment exists but social traditions negatively affect female decisions of selecting a husband. The study presents evidence of the marriage patterns in one of the crisis countries which is facing the challenges of occupation and trying to protect itself within the societal paradigm with its traditions and heritage

Perspective on Recent Upturns in Marital Dissolution in India: An Illustrative Analysis through Proportional Hazards Life Table Approach

Neelanjana Pandey¹, Praveen Kumar Pathak and Faujdar Ram

International Institute for Population Sciences, Mumbai, India

e-mail address: ¹neelanjana.p@gmail.com

This study is an attempt to throw light upon the recent scenario of marital dissolution in the background of the changing socio-economic landscape in India. It brings out the various social, economic, and family environments under which marital dissolution occurs in the Indian context.

The main objective of the study is to understand the influence of pertinent socio-economic, demographic and household characteristics on the risk of marital dissolution. Data for the study came from the 2005-2006 National Family Health Survey (NFHS) conducted in India. The analytical sample size is restricted to 78,146 ever married women (15-49 years) after excluding 15,578 (16.4%) cases with any missing values. We have used the proportional hazards life table approach to analyze the effects of selected socio-demographic covariates on life tables simultaneously. As the paper focuses on dissolution of the family unit rather than its legal representation of divorce, analysis will be based on all those women who were divorced or living separately.

Preliminary findings suggest that around two percent of women had experienced marital dissolution in India. After adjusting for various confounding variables, the risk of marital dissolution was found to be significantly higher among women married at relatively later ages, had relatively higher levels of education, working in skilled jobs, belonged to urban areas, were living in non-nuclear families, were non-Hindu, schedule caste/schedule tribe, with low economic status, and had no children. We further found that the likelihood of marital dissolution was higher among women belonging to recent birth cohorts (born during 1986 onwards). There was marked regional variation in the prevalence of marital dissolution; women belonging to the North-eastern and Southern parts of India had significantly higher risk of marital dissolution than those from the rest of India. To conclude, the study clearly brings out the importance of the various risk factors associated with the advent of marital dissolution in India. Observing the recent upsurge in marital dissolution, it is important to consider alternative policy arrangements and programmes for providing care and support to the children and women to lead a quality life.

Prevalence and Correlates of Women's Marital Dissolution in India

Prem Saxena¹ and Laxmikant Dwivedi

Tata Institute of Social Sciences, Mumbai, India

e-mail address: ¹premsaxena2004@yahoo.com

The purpose of the present paper is two-fold: first, to find the prevalence of women's marital dissolution (divorce, separation and desertion) in India; and second, to identify socio-economic and demographic factors which possibly elevate the risk of marital dissolution. To accomplish the objectives, data from the latest National Family Health Survey (NFHS-3) conducted during 2005-06, have been used. The NFHS-3 covered a nationally representative sample of 124,385 women of reproductive age. Out of the total sample, 93,724 ever married women were interviewed from selected households and information on current marital status was taken along with other socio-economic and demographic characteristics. Only 1878 women were found whose marriage was dissolved due to divorce/separation/desertion these were non widowed women and had been married only once. This study is based on the analysis of data collected from these women -- hereafter referred to as study women. The background characteristics of the study women include: (i) social residence (rural/urban); religion (Hindu/Muslim/others); caste [Scheduled caste/Scheduled tribe/Other backward caste (OBC)/Others]; education of respondent and her husband; couple's education (wife's education > husband's education/wife's education < husband's education/equal). (ii) economic couple's work status (both not working/both working/wife working but husband not working); and wealth index (poorest/poor/middle/richer/richest); and (iii) demographic age of rural respondent (<=30/30+); age of urban respondent (<=30/30+); sex composition of living children of rural women (no son and no daughter/ only daughter/only son/both sons and daughters); sex composition of living children of urban woman (same categories as for rural woman).

Results show that the prevalence rate of marital dissolution varied from a minimum of 9 per 1000 women to a maximum of 68 per 1000 women. Among social characteristics, the greatest risk was for those couples where wife's educational qualification was more than that of the husband's. Marital dissolution for scheduled caste women was highest among the four caste groups. Muslim women also had a higher prevalence rate of marital dissolution than Hindu women. Similarly, women living in urban areas had a higher risk of marital dissolution. Among economic factors, the highest prevalence rate (68) was for couples wherein the wife was working but husband was unemployed, followed by those couples where both were working. Among demographic characteristics, urban women aged 30+ had an elevated risk. Sterile women (both rural and urban) were also more prone to marital dissolution. Women having only daughter(s), particularly in rural areas also had a higher prevalence rate of marital dissolution as compared to those having son(s) or had given birth to both sons and daughters. These results are based on logistic regression analysis after controlling for covariates and other factors. Possible reasons for differentials in marital dissolution rates observed in different populations have also been discussed. Using data of NFHS-1 and NFHS-2, the present study also tries to answer the question: Is marital dissolution among urban women on the rise in India? Based on the findings of this study, a conceptual model giving the linkages between the socio-economic and demographic factors responsible for elevated risk of marital dissolution in India is presented.

**Effect of Marriage Dissolution on Women and Child Health in India:
Evidence from NFHS-3**

Srinivas Goli and Grace Mundu

International Institute for Population Sciences, Mumbai, India

e-mail address: ¹ sirispeaks2u@gmail.com

In India, the process of divorce is lengthy and hazardous and has a significant impact on health in general, and the health of women and children, in particular.

The present study examines the determinants and differentials of marriage dissolution and its effect on the health of women and children in India.

The study uses data collected from National Family Health Survey-3 (2006-05). The definition of marriage dissolution used in the study includes divorced, separated and deserted individuals.

It is evident from the results that the percentage of marriage dissolution among females is nearly three times higher than that of males. Results further illustrate that there is more marriage dissolution among urban people than among their rural counterparts, and in tribal and Christian communities, marriage dissolution is two times higher as compared to other religions. Multivariate analysis indicates that wealth, education and region are the strongest predictors of marriage dissolution in India. Results also reveal that divorced and separated women as well as their children have poor health.

These results establish that marriage dissolution has strong socio-economic acquaintances. They also reveal that marriage dissolution has important implications for the health of women and children.

The Migration Flow

Ali Ghassab

Population Studies and Research Center in Asia and the Pacific, Tehran, Iran

e-mail address: ghassabali@gmail.com

"In-migration" (internal migration into one place from another) and "out-migration" (internal migration out of one place to another) have been studied as a relation between two scalar quantities: number and location of migrants. (In/Out)-migration can be considered as a vector concept instead of a scalar type. As a mathematical demographic method, each (in/out)-migrant's migration corresponds to a special "(in/out)-migrant vector". Each point corresponds to the sum of related (in/out)-migrants' vectors, and for each destination/departure, "the center of (in/out)-migration" is defined. Also, an "(in/out)-migration field" is made as a vector field. (In/Out)-migration field can represent part of fact about all of (in/out)-migration data; for example, on the field, "(in/out)-migration flows" are achieved. These flows show movement of migration and migration patterns. A migration flow is a smooth curve; so finding each non-smooth zone on a population region denotes an irregularity in the migration pattern.

An Application of Data Reduction Method to Obtain Nutritional Status of Under-five Children

Amita Pradhan

Department of Community Medicine, KIST Medical College Teaching Hospital, Lalitpur, Nepal
e-mail address: amiseason@yahoo.com

In this paper, nutritional status is defined using three different indices considering height per age, weight per age and height per weight of a child. The objective of this analysis is to obtain nutritional status as a single variable with the essence of all variables used to describe stunting, wasting and underweight, and form a regression model.

The study used data from the Nepal Demographic and Health Survey 2006. Principal component analysis was carried out using variables of age, height and weight to obtain the factor score. Regression model was fitted taking the factor score as the dependent variable and child related variables namely, sex of the child, size of the child at birth; household variables namely wealth index sex of household head, type of residence; and mother related variables namely education, occupation, working at home or away, and who decides how to spend money, as independent variables. Sequential regression analysis was conducted with a dummy variable model for categorical responses.

Findings showed that age, height and weight are significantly correlated. Kaiser-Meyer-Olkin measure of sampling adequacy showed that the sample is adequate for principal component analysis. Bartlette's test of sphericity showed a significant relationship among the variables. The first component accounted for 94.16% of the total variance. According to scree plot, one factor was retained. Further, the first model showed effects of child related variables; F change was significant. When household related variables were added, the adjusted R² increased by just 0.011 but F change indicated that these variables have significant explanatory power on nutritional status beyond that due to child related variables. When mother related variables were added, R² increased by 0.011 and its effect was significant after removing the effects of child and household related variables. Regression sum of squares for the first model explained 49.58 of variation ($p < .0001$); R² was 0.012. While observing the coefficients, the t value for sex of child and size of the child at birth, dummy variables had a t value that was significantly higher than 2 or lower than -2. Second model sum of squares explained 94.859 of the variation ($p < .0001$); R² was 0.022. Sex of child and size of the child at birth dummy variables had a t value significantly higher than 2 or lower than -2; the wealth index factor score had a t value significantly higher than 2; and sex of household head, significantly lower than -2, but for type of place of residence, it was lower than 2 ($p = .08$). The third model explained 139.717 of variation ($p < .0001$); R² was 0.033. Occupation of mother and 'works at home or away' had insignificant t values whereas education of mothers had significantly lower values than -2 while the dummy variables for making decisions to spend money in the household showed mixed results. Though these models have lower R², adding household and mother related variables increases the variations explained and all models are significant.

To sum up, principal component analysis can be used to obtain a single numeric variable which can be used to form different models using different independent variables and a single dependent variable nutritional factor score instead of different categorical dependent variables such as stunting, wasting and underweight.

Consistency in Population Data: A Comparison between the Census and Civil Registration System

Ardi Adji¹ and H. Rachmad

BPS Statistics, Indonesia

e-mail address: ardiadji@bps.go.id

This paper examines the consistency of two population datasets at the village level in NTB and DKI Provinces of Indonesia. The datasets compared are those of the population Census based on the census pilot in 2010 and the population data of the Civil Registration System which is administrated and managed by the Directorate General of the Main Administration under the Internal Affairs Ministry. Using Visual FoxPro to match both data sources showed that the increasing number of variables had been compared in each village would be in line with the growing inconsistency between the two datasets. For example, in NTB Province the comparison based on 'name' alone gave a matching rate of 19.22%; however, when based on 'name and year of birth' the matching rate reduced to just 2.0%. Finally, these findings are expected to attract direct action for improving the quality of population data.

Trend Analysis and Estimation of Migration in Nepal

Mukesh Kumar Mishra

e-mail address: call.mishra@gmail.com

Migration plays a significant role to bring change in the composition of population in a country. The study of level and pattern of migration within a country is essential as it can be crucial for formulation of effective plans and strategies to tackle the migration related issues. This study is based on secondary source of information collected from CBS 1961 to 2001. The study follows descriptive methodology and analyzes the trend of migration in Nepal with the help of tables and charts. The paper basically aims to shed light on the trend and pattern of national and international migration in Nepal as well as estimates the net migration of Nepal in-between the period of the year 1991-2001. The study reveals that majority of people's movement was inter-district (13.24%) than that of the inter-regional (9.25%) in 2001. This trend was found continuing since 1981. Similarly, the percentage of out migration was found higher in Mountain and Hill but lower in Tarai. In migration, into Tarai was higher than that of the other ecological zones except Central Hill in 2001. During this period, Central Hill had higher in-migrants (17.7%) than Central Tarai (14.2%). It may be so because of the presence of capital city, Katmandu in this region. The study further, shows that urban areas have 95.6 percent native born population and only 4.4 percent are foreigners residing there. The paper finally does discussion on the causes and consequences of over migration in place of destination particularly in Terai and urban areas and suggests some ideas to overcome this problem on time.

MIS in HIV/AIDS Programmes: What is Lacking and How can Programmes be Strengthened

Praween K. Agrawal

India HIV/AIDS Alliance, New Delhi, India

e-mail address: praween_agrawal@rediffmail.com

Considerable MIS data are generated in most intervention programmes at the implementation level, and sent from one implementer to the next, and finally to donors. This takes a great deal of time and energy of programme implementation staff at different levels. However, due to lack of data analyzing capacity or time paucity, MIS information is either under utilized or not utilized at the programme implementation level. India HIV/AIDS Alliance with Global Fund Round 6 has been implementing a care and support programme for CAA and CLHIV called CHAHA since June 2007. With experience and learning from phase-1 of CHAHA, its manual MIS has transformed into web-based CMIS software which has inbuilt ability to analyze data at the programme implementation level to provide feedback.

Findings indicate that the CMIS system of CHAHA programme has been able to generate graphical illustration of services/linkages to beneficiaries (CAA/CLHA) according to crucial backgrounds characteristics such as children's orphan status, age, sex etc. This was automatic, quick and easy to understand by programme implementers which helps in prioritizing appropriate need-based services and linkages by volunteers/ORWs and proper programme monitoring. To conclude, piloting the software was an important learning to understand practical constraints and fill-in gaps. The design of a MIS should be informed by programme planners and implementers apart from meeting donor requirements and must have inbuilt feedback mechanisms. Despite the software in place, data analysis skills of implementing NGOs are needed to understand and interpret the data sets and trends over time at the programme implementation level to make genuine use of the rich MIS information of any programme.

Age Misreporting in Southern States of India, 1971-2001

Aiswarya P.V.

Department of Demography, Nalanda College, Thiruvanthapuram, India

e-mail address: aiswaryaparvathy@yahoo.com

In developing countries such as India, age returns from censuses and surveys suffer from misstatement on account of ignorance of age, deliberate misstatement, and misunderstanding and misstatement of questions relating to age, illiteracy, social and cultural attitudes of respondents and a variety of other factors. Among these factors, the one most commonly found is digit preference, that is, the tendency of people to report their ages ending with certain preferred digits. This may lead to biases in the results of studies which use such data. Therefore, to find out biases in age data, it is necessary to get a clear picture of the demographic situation of a country. Hence, the main focus of this study is to find out how age misreporting due to digit preference has varied over decades, that is, from 1971 to 2001, in the southern states of India. It is generally believed that the level of education of the respondent and place of residence of the household can have some influence on the quality of age reporting. Age heaping would be less pronounced among literate than illiterate persons. And we also have the case of urban people reporting their ages more accurately than their counterpart in rural areas. Therefore, through this study, an attempt is also made to find out the influence of literacy and urbanization on reducing age misreporting across the considered decades.

Secondary data, that is published reports of the censuses of India conducted in 1971, 1981, 1991 and 2001, were used for the analyses. Age misreporting due to digit preference was determined by using Myer's index. Literacy rate and percent urban population were calculated to study their effect on reducing age misreporting. Finally, in order to understand easily, the changes that have occurred in age misreporting in each of the southern states, age pyramids were also constructed for the period 1971 to 2001.

The results showed that from 1971 to 2001, age misreporting due to digit preference has decreased in the southern states of India, misreporting due to digit preference is greater in rural than in urban areas, and everywhere, females show a greater tendency to misreport their age compared to males.. The two variables under consideration, literacy and urbanization also show some influence on reducing age misreporting in that they are negatively correlated. The age pyramids show that though age misreporting has decreased over the decades in the southern states of India, most people, especially after the age of 19, still prefer to report their age ending with the digit 0 or 5. Hence, the government should take necessary steps to improve literacy, impart proper training to enumerators; make people aware of their own age and the importance of reporting their age correctly, and the consequences of reporting it incorrectly. This will help in reducing age misreporting to a considerable extent.

Analysis and Adjustment of the Population Size and Structure in China's 2000 Census

Quanbao Jiang

Institute for Population and Development Studies,
Xi'an Jiaotong University, Xi'an, China
e-mail address: recluse_jqb@126.com

Based on data from censuses, applying survival analysis and numerical fitting method, as well as other statistics and contrast analysis, the paper explores under reporting and over counting in the 2000 census and adjusts the population size and structure. It is found that there are 37.43 million unregistered children aged from 0 to 9, with an underreporting rate for this age group of 19.0 percent, and 11.34 million people who have been over counted, aged from 10 to 60. The total population in the fifth census reaches 1271.2 million and the rate of underreporting is 2.05 percent.

Exploring the Factors Influencing Male Participation in Maternal Care in India

Abdul Gaffar¹ and Sateesh Gouda M²

¹Gulbarga University, Gulbarga, India, ²
Karnataka Health Promotion Trust, Bellary, India
e-mail address: ¹agkhan_umar@yahoo.co.in

Over the years, the issue of maternal health has predominantly been seen and treated as a purely feminine matter. The involvement of men in ensuring and enhancing maternal health is actually a new idea, first hatched at a conference in Cairo in 1994. As a result, in the last few years, more attention has been focused on the issue of male involvement in reproductive health. A review of the literature shows that there are many studies that acknowledge the importance of male involvement in maternal care; however, it is important to go beyond that and understand the factors influencing male involvement in maternal care. Therefore, in this article, an effort was made to understand the factors influencing men's involvement in maternal care by classifying all the factors in three groups such as, factors related to men, factors related to women, and common factors. Data from the National Family Health Survey round-3 (NFHS-3) was used for the purpose of the study. Both women's and men's files were merged for analysis purposes. Age, education, exposure to mass media and occupation were studied separately for men and women, and place of residence, standard of living, age difference between couples, number of living children, sex of last child (if it is second child), caste, religion and family size or type of family, were taken as common factors.

Findings suggest that education, occupation and exposure to mass media are important factors at the individual level; however, compared to men's education, women's education has a significant influence on male involvement in maternal care while men's exposure to mass media has a greater impact on their involvement in maternal care. Among the common factors, standard of living, number of living children and age difference between the spouses are the most influential factors. Hence, it is suggested that there should be some more efforts to reach men through mass media and to actively promote women's education.

**Women's Empowerment in Household Management and Decision Making:
A Comparative Study of Social Disparity with Spatial Dimensions in India**

Arabinda Acharya¹ and Aditya Kumar Patra²

Gokhale Institute of Politics and Economics, Pune, India

e-mail address: ¹aravindaacharya@yahoo.co.in

Daughters are avoided but daughters-in-law are necessary for family well-being and perpetuation. This is the dichotomy of our society and it exemplifies the position of women in the society. Traditionally, men are the breadwinners and women are engaged in household chores. This is not a standalone situation in our country; rather it is a worldwide phenomenon. Historically, the world over, either by law or by custom, the status of women is undermined by asymmetrical power relationships in decision making, personal and social rights, access to resources and entitlements. Women are the world's largest excluded category. However, the concept of the status of women has undergone a great deal of change over the last few decades. Gender Development and Women Empowerment is the catch phrase of the present day world. Factors that lead to gender disparities in many countries include, among others: (1) social institutions such as norms, rights and laws; (2) household decisions and the resulting resource allocations; and (3) economic policies that affect the level of household income and its distribution among household members (World Bank 2000). Hence, household as a reckoning unit in the analysis of gender equality occupies an important place. The role of female members in household decision making and management carries utmost importance. Hence, empowerment of women with respect to household income and decision making is crucial. As a sequel to this, an attempt has been made in this paper to examine (1) gender development and women's empowerment in India; (2) empowerment of women with respect to household management and decision making capacity at the state level; and (3) the differences in empowerment of women of the General Category vis-à-vis the Excluded Groups across the states. Utilizing the third round of the National Family Health Survey (NFHS) dataset, bivariate and multivariate techniques (Principal Component Analysis) were employed towards this end.

This paper proposes to compute an index of women's empowerment with respect to the role of women in household management and their decision making power in the family. The index is formulated by combining various indicators pertaining to women's capacity in household management at the state level. This is a weighted method where the weights are the variances of successive principal components. WEI (Women Empowerment Index) is computed for each of the states (except the north-eastern frontier states) and the national capital Delhi, on the basis of caste line that is, for scheduled category and general category women. Empirical evidence shows that southern (Andhra Pradesh 1.823 PCA Score) and western states (Gujarat 0.411) are advanced, and central (Madhya Pradesh -0.361) and northern states (Haryana -1.161) are backward in household management and decision making capacity of women. In the southern states, scheduled caste women are better off. However, in the western states, women belonging to the general category are better off in comparison to their scheduled caste counterparts.

Patriarchy and the Victimization of Women in Nepal: Reality or Myth?

Jyotsna Tamang¹ and Ramesh Adhikari²

¹CREHPA, Kathmandu, Nepal ²Triibhuvan University, Kathmandu, Nepal
e-mail address: ¹j.tamang@gmail.com

Patriarchy has long been the dominant set of norms, rules, beliefs and laws in Nepal. This paper attempts to examine the prevalence of and factors affecting domestic violence among married women in Nepal. More specifically, it aims to investigate whether patriarchy has an impact on domestic violence in the Nepali context.

The data used in this paper is from a cross-sectional survey on domestic violence in Nepal conducted in 2009. The association between domestic violence and the explanatory variable was assessed in bivariate analysis using chi-square test. Logistic regression was used to assess the net effect of patriarchy on domestic violence after controlling for other variables.

Results show that overall, almost two out of every three women had faced either sexual or physical violence (63%) in their lifetime. Among these, about one-fourth has faced both physical and sexual violence (25%). Furthermore, about 30% of the surveyed women reported facing physical violence while 59% had faced sexual violence during some point in their life. Logistic regression analysis found that education of the respondents, husband's occupation; alcohol consumption and male patriarchal control were significant predictors for domestic violence in Nepal. Literate women were 29% less likely (OR=0.71) to experience violence than those who were illiterate. Similarly, respondents whose husbands worked in service or business were 28% less likely (OR=0.72) to have experienced domestic violence than those whose husbands were engaged in agricultural activity. On the other hand, women whose husbands consumed alcohol were 1.5 times (OR=1.5) more likely to report domestic violence than their counterparts. Notably, women who experienced a higher level of patriarchal control from their husbands were more likely to face coercion than women who did not face any such control. For instance, women whose husbands had low and high patriarchal control were 2 times and 11 times, respectively, more likely to have experienced domestic violence than those whose husbands lacked such control. To conclude, the study shows that domestic violence is a widespread and serious problem in Nepal. No single factor accounted for the high prevalence of domestic violence; many factors contributed in this regard. Most importantly, male patriarchal control appears to be the most powerful predictor of the increasing domestic violence in the Nepali context. Hence, in order to decrease domestic violence, programmes should focus on reducing patriarchal control so that domestic violence will decrease and the overall well being of the family will be maintained and enhanced.

Gender Inequalities in Quality of Life in Iran

Maryam Tajvar¹, Mohammad Arab and Ali Montazeri

Tehran University of Medical Sciences, Tehran, Iran

e-mail address: ¹maryam.tajvar@ishtm.ac.uk

Although women on average live longer than men, they always report a lower quality of life (Annandale E; Hunt K. ed. 1999). A study of estimates of healthy life expectancy conducted in the US showed that in almost all the countries, women have fewer healthy years of life than men (Oyegbite KS, 2006). Nowadays, as individuals live longer than before, their Health-Related Quality of life (HRQoL) becomes more important. This paper tends to show gender inequalities in health and HRQoL of Iranian elderly and argue on its likely explanations. The study was a cross-sectional survey. A sample of 400 community residents, aged 65 years and above, were selected from all the districts of Tehran using the stratified sampling method, and interviewed. The questionnaire of Iranian version of SF-36 was applied as the data collection instrument. This questionnaire comprises 8 subscales and 2 summery scales, physical and mental health.

Results indicate that more respondents were men (56.5%) than women, although both males and females had an equal chance of being selected. The age group of 65-69 years old (38.3%) was the dominant age group in the study sample. The physical and mental health aspects of their HRQoL, irrespective of gender, were 55.01 and 63.86 out of 100, respectively, which demonstrated a worse physical health compared to mental health for both sexes. However, women reported significantly poorer HRQoL compared to men with respect to both physical and mental health ($p=0.001$). More interestingly, women also had worse scores in all 8 subscales of HRQoL. We conclude that women need to receive serious and substantial attention from health associated authorities and policy makers in Iran. Also, as HRQoL is highly associated with different factors such as socio-economic status, living standard and emotional support, improving women's health and their HRQoL demands a population-based, multi-sectoral, multi-disciplinary, and culturally relevant approach to create a suitable environment for providing better living conditions for women.

Women's Autonomy and Son Preference: Evidence from Three States in India

Nidhi Jain¹ and Aparajita Chattopadhyay

International Institute for Population Sciences (IIPS), Mumbai, India

e-mail address: ¹jain_nidhi29@yahoo.com

Son preference is a burning topic of research in a patriarchal society like that of India. The many questions that have encouraged authors to take up this topic for study include whether son preference has increased/decreased over time, what are the determinants of son preference and how is far women's autonomy related with this phenomenon. However, the extent of son preference is not similar among all population sub-groups in a diverse country like India. Hence, the study selected three states with varying socio-economic character, culling data from the National Family Health Survey-2 (1998-99) and National Family Health Survey-3 (2005-06). Our analysis is based on currently married women of reproductive ages, that is, women 15-49 years old. Findings indicate that with time, son preference has gone down both in the ideal and actual sense in the selected states. However, the sex ratio among second-born children depends on the sex of the first child; If the first-born is a girl, the sex ratio is much lower than if the first-born is a boy. Higher autonomy definitely reduces son preference, but the relation is observed to be stronger in ideal fertility preference than actual (contraceptive use). Translating autonomy from ideal to actual is the challenge before us.

Skewed Child Sex Ratio in India: Revisiting Landholding-Patriarchy Hypothesis

Srinivas Goli¹ and P Arokiasamy

International Institute for Population Sciences (IIPS), Mumbai, India

e-mail address: ¹ sirispeaks2u@gmail.com

Land has been and continues to be the most significant form of property ownership in rural India. It is a critical determinant of economic, social and political well-being. There is substantial evidence that economic resources in the hands of males in the household do not benefit female members in equal degree. A central tenet of eco-feminism states that male ownership of household land has led to the patriarchal culture. Patriarchy has emerged with the emergence of the family. Previous studies have hypothesized that the imbalance in sex ratio is an outcome of the patriarchal intra-familial economic structure coupled with the perceived cultural and economic utility of boys over girls. This paper explores the relevance of the landholding-patriarchy hypothesis for explaining family building strategies and its relation to the dynamics of sex discrimination from global and Indian historical contexts. An analytical framework has been developed based on historical evidences of household socio-economic structure, women's status and resultant sex ratio trends to understand the linkages. The recent NFHS (2005-06) data is used for examining sex ratio trends and patterns. It is evident from the analysis that a household's landholding is closely associated with sex ratio variations; an increase in the size of the household landholding seems to be perfectly related to child sex ratio and sex ratio at birth. This is attributed to the higher preference for sons in order to maintain large sizes of household land in accordance with the cultural context of division of labour in Indian society. Crucial sex ratio determinants like women's work participation, women's decision making power in the household and personal matters, and women's freedom of movement are lower in high landholding households compared to low landholding households. The results suggest that household landholding is a crucial determinant of sex ratio.

**Scarcity of Women:
A Study regarding Awareness and Coping Strategies of Unmarried Men in the North Indian State of
Haryana**

Sunil Kumar Gulati¹ and Aswini Kumar Nanda²

¹ Indian Institute of Technology, New Delhi, India;

² Population Research Centre Punjab at CRRID, Chandigarh, India

e-mail address: ¹sunilaol@gmail.com

Marriage being universal in India, bachelorhood and delayed marriage, particularly among men, provides an effective window to understand social changes concerning marriage values, norms and practices. Since the continued decline in the proportion of women in Haryana has raised questions on the prospects of marriage for young men, understanding the perceptions of youth, regarding the fate of unmarried men, delayed marriages, and the role of society and family etc. will help in developing strategies for tackling the impending situation. The objective of this study thus, is to unfold the perceptions of youth regarding the situations that unmarried men undergo in the rural and urban areas of Haryana State in the event of delayed marriage or non-marriage (due to non-availability of a female). The paper also suggests ways to keep such unmarried men occupied to minimize the harmful effects to society on account of the female deficit. For this research, based on primary data, the sampling frame involves 429 respondents (male youth aged 14-35) drawn from urban and rural areas of two (economically) forward, and two backward districts of Haryana. Responses obtained through detailed interviews of respondents were analyzed using multivariate analysis. Qualitative analysis was carried out by in-depth interviews of an additional 44 respondents from a diverse background. A significant proportion (97%) of the respondents wanted to marry, and the question, if at all, is when? This shows that marriage is usually taken for granted. But, with almost 80% of the respondents agreeing that scarcity of females is a critical issue, the fate of men awaiting wives needs urgent attention. The problems anticipated due to scarcity of women were many, such as availability of a girl for marriage (66%), increased crime against women (24%), emergence of bride price etc. Apart from forced waiting, almost 51.6% of respondents were reconciled to remaining unmarried or marrying a widow (12.1%) or purchasing a bride (10.3%), visiting a sex worker (10%), etc. Awareness about still-unmarried males was also quite significant, especially in rural areas. The fate of those who did not marry by usual age was analyzed; the consequences observed were very late marriage, polyandry, marriage to a widow or a divorcee, or a migrant (after payment), and non-marriage. Some 39% felt that society found faults with such men and even cast them out. Politically, unmarried men are likely to be a much wanted and active group. Frequent displays of fury against the haves and the state are likely, along with positive aspects such as better prospects for widow re-marriage, rise in value of women, more male enrolment in higher education etc. and negative consequences such as enhanced flesh trade, cross-cultural/border migration, breaking down of the joint family, higher divorce rates, chances of polyandry, increase in crime in general and crime against women and children in particular, increase in incidence of STDs, consumption of drugs, narcotics, alcohol etc., higher pre and extra marital sex and instances of same-sex relationships among males. The paper identifies economic, technological, social, legal, and political strategies for constructively engaging youth.

**Inter-Caste Marriage, Family Size and Son Preference in India:
Evidence from National Family Health Survey-3**

Vandana Gautam¹, T K Roy, Kumudini Das, P K Tripathy and K C Das
International Institute for Population Sciences (IIPS), Mumbai, India
e-mail address: ¹vandu.gautam@gmail.com

The concept of caste system and religious discrimination are like a bane in the path of India's progress. For centuries, Indian society, especially Hindu society, has been divided on the basis of the caste system and religion. A number of social, economic, demographic and cultural factors influence son preference and family size preference. Even today, India is struggling to come out of this social menace. Marriage is regarded as the most important social custom and the best means to remove the barrier of caste system. It is expected that with modernization and development, the impact of social forces like caste, religion and various other social taboos on fertility will become weaker. According to the recently conducted National Family Health Survey-3 in India, almost 10% of the marriages among Hindus are inter-caste, thereby reflecting the social change in reducing the influence of caste barriers in marriage. A strong preference for sons may be an obstacle to fertility decline if couples continue to have children after reaching their overall family size goal. The effect of son preference on family size is thought to be most pronounced in countries like India that are in the middle of the fertility transition. So far, no attempt has been made to study the linkage between inter-caste marriages, family size and son preference in the Indian context. Using data from the recently conducted NFHS-3, the present study tries to explore if there is any association between inter-caste marriages, family size and son preference in India. For the present study couple data for Hindus only has been used. To find out the family size preference, ideal family size has been used. The study reveals that in India, 22.3% of couples have preference for sons and the mean number of ideal children is 2.28 which is quite high. Marital duration, place of residence, education of couple, type of family, wealth and mass media exposure significantly affect inter-caste marriages. After controlling socio-economic and demographic variables, it is found that son preference and ideal family size are low among couples who have had an inter-caste marriage. This may be due to the fact that women in inter-caste marriages are more empowered with regard to decision making. With the increase in the education level of couples, the ideal number of children declines. Both ideal family size and son preference are lower among couples in urban area, those having media exposure, and those belonging to the high economic class. We conclude that there is significant association between inter-caste marriage, family size and son preference in India.

Sex ratio at birth in settings of different population policies in rural China

Yan Che

London School of Hygiene & Tropical Medicine, UK;
Shanghai Institute of Planned Parenthood Research, Shanghai, China
e-mail address: che_yan2004@yahoo.com.cn

The sex ratio at birth (SRB) in China was normal (close to 106 males per 100 females) in most years in the 1960s and 1970s, but it increased after 1980: 108.5 in 1981, 110.9 in 1986, 113.8 in 1989, 115.6 in 1995 and 117.8 in 2000. It is generally agreed that China's distorted SRB was due mainly to the culture of son preference, together with its compulsory family planning programme and strict population policy. However, China's population policy has various forms and varies between provinces. This study used a quantitative indicator "policy fertility" to measure population policy at provincial level and to investigate effects of different population policies on sex ratio of first and second birth. Birth data in this study are derived from 2001 National Family Population and Reproductive Health Survey, which interviewed 39,585 women aged 15 to 49 throughout the country. This study focused on rural participants, which accounted for 74% of total sample.

Sex ratio of first and second birth varies between settings with different population policies. In setting of 1-child policy, sex ratios are slightly distorted for both the first and second birth. In setting of 1.5-child policy, sex ratio of first birth is largely normal but highly distorted in the second birth. In setting of 2-child policy, overall sex ratios of both first and second birth are close to normal. The variation of SRB in settings of different population policies can be due mainly to limitation of the number of children that embed in respective population policies. Under 1-child policy, women would seek sex-selective abortion for the desired gender of the first child. Under 1.5-child policy, women are more likely to seek selective abortion for the second birth. Under 2-child policy, women may have less strong intention to seek sex-selective abortion for a son. Moreover, women's education, their gender preference, sex of first birth and quality of family planning services at township's family planning service centre are associated with imbalance in SRB. However, after adjusting for other factors, only sex of first birth is associated with increased probability of a son as a second birth in setting of 1-child policy, while women's education, their gender preference and sex of first birth are significantly associated with the likelihood of a son as a second birth in setting of 1.5-child policy. These findings would be useful to modify strategies to reduce imbalanced SRB in settings of different population policies.

Declining Parsi Population in India: A Demographic Dilemma?

D P Singh

Centre for Research Methodology, Tata Institute of Social Sciences, Mumbai, India

e-mail address: dpsingh@tiss.edu

The Parsi community, which follows the Zoroastrian religion, consists of 69,601 persons according to the latest census of India (2001). Parsis constitute less than 0.01% of the total population of India. The major concentration of the Parsi population is in the state of Maharashtra (78.7%), followed by Gujarat (16.7%). In 1991, Greater Mumbai district alone accounted for about 70% of all Parsis in the country. It is obvious that because of their high concentration in Mumbai, the Parsis in Mumbai are likely to play the most vital role in decision making about their community as well as its future.

Based on the findings of a survey of 6,596 Parsi households in Mumbai conducted by the Tata Institute of Social Sciences in 1999, this paper discusses the nature and dimensions of the demographic dilemma confronting the community. The study shows that old people (60 years and above) accounted for 33% of the total population surveyed and 32.3% of that in urban Maharashtra (2001 Census). In Mumbai, the child population (<15 years) was just about 10.4% of the total population and 12.3% of the population of urban Maharashtra. The average age at marriage was high -- 25 years for women and 31 years for men, and the proportion of unmarried persons accounted for 36% of the population. The average number of children ever born was much below the replacement level (1.34). The community did not show any noticeable gender bias in terms of health, education, occupation, etc. ,and its educational and occupational aspirations and achievements were also high. The Parsi community is faced with a demographic dilemma; below replacement level fertility high levels of mortality, stringent religious rules regarding intercommunity marriages, emigration, and childlessness appear to be some of the factors that contribute to the dwindling size of the community.

A Geographical Study of Ethnic Groups and Conflicts in Manipur Hills

S. Thangboi Zou

Department of Geography, North-Eastern Hill University, Shillong, India

e-mail address:

Conflict has been almost the keyword in regard to ethnicity in Manipur. The State is composed of three main ethnic groups namely Meitei — inhabiting the Imphal valley, and Naga and Kuki-Chin who have settled in the Hills surrounding the central valley. There are several tribes within the fold of both Nagas and Kukis who maintain separate scheduled tribe identities of their own. In a larger context, the three major ethnic groups — Meitei, Naga and Kuki-Chin — geographically reflect distinct cultures and their own social mobilization. The hill areas see a great deal of ethnic assertions among various Kuki and Naga tribes. The Nagas made their movements for integration of their inhabited areas in Manipur with the present Nagaland while the Kuki-Chins also wish to delineate a homeland covering their areas of settlements across the hills, at least not to secede from the State of Manipur — an ideology in stark contrast to that of the neighboring Nagas and vice versa. At this juncture, what role does geography play in defining the ethnicity and factors causing conflict among the various tribes inhabiting the hills and valleys of Manipur? How does the spatial distribution of tribes display ethnic maps in relation to their socio-cultural and political consciousness, and how does it eventually cause conflicts? All these issues have been explained in the paper.

Theme 2: Mortality, Longevity and Health:

Various Causes of Death and Gains in Life Expectancy

Alireza Teimouri

Department of Demography, University of Kerala, Thiruvanthapuram, India

e-mail address: alirezateimouri260@yahoo.com

The multiple-decrement life table is used widely in human actuarial literature and provides statistical expressions for mortality in three different forms. One of them is the life table with particular cause elimination. Cause elimination life tables address the hypothetical question of what a cohort's mortality experience would be if a particular cause of death were eliminated. The goal of this study is to find out the gain in life expectancy after specific cause elimination for the population as a whole as well as for male and female populations for selected causes of death.

The study has used the following two types of data: (1) Mortality data by age and cause collected from the Ministry of Health and Medical Education (MO&HEM) of Iran, for Sistan and Baluchistan provinces, in 2006. Data are categorized by eight causes of death for males and females, and (2) mid-year population, collected from the Statistical Center of Iran (SCI) based on the census carried out in 2006. Assuming that for the mortality rate is additive of various cause-specific-mortality-rates, Chiang's method provides a new approach to construct ordinary and cause elimination life tables.

The results show that in 2006, for Sistan and Baluchistan provinces of Iran, the highest gain in life expectancy was due to elimination of cardiovascular disease (CVD), followed by other causes of death. The gain in life expectancy by CDV elimination is higher for the 30-59 age group than it is for infants due to other causes. The impact of elimination of infectious on life expectancy showed the least gain among all age groups, especially for older populations. The gain in life expectancy is higher for the male population when all selected causes of death except cardiovascular diseases are eliminated, elimination of which has higher gains in favour of females.

Impact of Low Physical Activity and Below Recommended Fruit and Vegetable Intake on Risk Factors of Non Communicable Diseases (NCD)

Arabinda Acharya¹, Siddhivinayak Hirve² and Sanjay Juvekar²

¹Gokhale Institute of Politics and Economics, Pune, India;

²Vadu HDSS – KEM Hospital, Pune, India

e-mail address: ¹aravindaacharya@yahoo.co.in

Lack of physical activity leads to chronic non-communicable diseases (NCDs), one of the leading causes of morbidity, disability and mortality, across the world. However, the burden of chronic disease deaths is greater in low-income and middle-income (more than 80%) countries as compared to high-income or developed countries. Further, most of the developing countries lack epidemiological data on the burden of chronic NCD and its risk factors. In a nutshell, several past studies have found that lack of physical activity and below recommended food intake contributes more to chronic non-communicable diseases such as stroke and heart disease which cause higher morbidity and mortality. Adding low fruit and vegetable consumption to this, puts it among the top 10 risk factors contributing to mortality worldwide. Further, the WHO/FAO recommends an intake of a minimum of 400 grams (or five servings) of fruits and vegetables per day to prevent chronic diseases such as heart diseases, cancer, diabetes and obesity. The objective of this study is to understand the level of physical inactivity and below recommended food intake attributed risk factors of NCD in Vadu, Health and Demographic Surveillance System (HDSS).

The study used cross-sectional survey data collected in 2005 by a multi country Health and Demographic Surveillance System (HDSS) site by INDEPTH NETWORK (www.indepth-network.org), with a robust sample (2000 men and women aged 25-64 years) from each site to measure risk factors, using the WHO stepwise approach. A total of 18,494 men and women from nine sites were interviewed, using stratified random sampling (in each 10-year interval) from the HDSS sampling frame. An attempt was made to generate adequate information on major NCD risk factors including self-reported information on tobacco and alcohol consumption; fruit and vegetable intake; physical activity patterns, and measured body weight, height, waist circumference, and blood pressure.

Findings show that nearly 84% ($0 < P < 0.05$) of the study population was overweight and 77% ($0 < P < 0.05$) was obese; this population is not involved in any kind of high physical activity. Further, nearly five out of every ten (47%) and six out of every ten (59.6%) who performed low physical activity were obese and overweight. Findings also showed that nearly one in every eight (16.2%) and one-fourth (23%) of the study population who consumed below-recommended levels of fruits and vegetables and were involved in high physical activity, were overweight and obese. We conclude that although the study population had access to varied fruits and vegetables, as well as to opportunities for physical activity, it lacked awareness of the ways in which these practices are associated with the prevention of deadly diseases; this lack of awareness may have resulted in limited practice. Hence, efforts need to be made to promote health education about the consumption of fruits and vegetables and physical activity in this setting.

Mortality Trends in Peninsular Malaysia: Its Implications on Health and Pension

Che Hashim Hassan¹ and Asma Hussein²

¹University Malaya, Kuala Lumpur, Malaysia

²National Population and Family Development Board, Kuala Lumpur, Malaysia

e-mail address: ¹hashim28153@um.edu.my

This paper aims to discuss the mortality trends among the three main ethnic groups in Peninsular Malaysia, namely the Malays, Chinese and Indians. The mortality trend is based on the Crude Death Rate (CDR), Infant Mortality Rate (IMR) and Life Expectancy at Birth (LEB). Trends of all three mortality indices have been studied starting from the 1940s to the current time. Based on the trend of IMR, an analysis was conducted to further reduce this rate particularly among the population living in rural areas as well as in the interiors of Sabah and Sarawak. IMRs in these regions are comparatively higher than the national rate. An analysis of LEB trends would give a clear picture of its implications on retirement age in Malaysia, and the implications of a LEB study on health expectancy in Malaysia is deemed timely and very necessary. The CDR in Malaysia has declined drastically since the early twentieth century. In 1911, CDR in Peninsular Malaysia was 39.2 and it continued to drop to 19.1 in 1931. From 1931 through 1947, CDR has stabilized at a level of 19/000, and continued to decline rapidly thereon. In 1957, the CDR was 12.4 and further declined to 4.8 in 1987. From then on, until 2007, CDR has stabilized at around 5/000 and It appears that the mortality transition in Peninsular Malaysia is complete. Similarly, the IMR in Peninsular Malaysia had experienced a rapid decline. From a high level of 102.2/000 in 1947, it declined to 75.6 5 (1957), 30.0 (1977), 9.5 (1997) and 6.3 in 2007. LEB in Peninsular Malaysia has shown tremendous improvement through the years starting from 1957; in 1957 for Malay, Chinese and Indian males, LEB was 50.23, 59.52 and 57.49, respectively; increasing to 70.04, 75.08 and 69.3 years, respectively, in 2000. Analysis of LEB can provide a clear guide to policy formulators to come up with strategies to improve the health status, lifestyles and a policy on pensionable age for Malaysia. The increase in the pensionable age is relatively small compared to the increase in LEB in Peninsular Malaysia. There is also a need to consider the health expectancy of the population. Many studies such as these have been done in developed nations in the West such as in the United States (Crimmins et.al., 1989), United Kingdom (Kelly, et.al., 2000) and Australia (Matters, C.D. 1991). In Asia, studies on health expectancy have been conducted in Japan (Yong and Saito, 2009) and in some other countries such as China, Indonesia, Singapore, Taiwan and Thailand (Ofstedal, et.al., 2004). A similar study should be conducted in Malaysia.

Determinants of Self-assessed Health of Thailand's Elderly

Fariha Haseen¹, Ramesh Adhikari^{1, 2}, Kusol Sothorndhada¹

¹Institute for Population and Social Research, Mahidol University, Thailand;

²Geography and Population Department, Tribhuvan University, Kathmandu, Nepal

e-mail address: ¹ far_haseen@yahoo.com

Population ageing is one of the most distinctive demographic events of the twentieth century in Thailand. The ageing of population is progressing rapidly in Thailand compared to other Asian countries. The key challenge for the family, community and the government is to ensure the physical and psychosocial well-being of the elderly. Self-assessed health (SAH) is an important measure of the health status of the elderly, which has implications on morbidity and mortality.

The objective of this study is to identify the determinants of self-assessed health among older Thai people.

Information from the "2007 Survey of Older Persons in Thailand was used, and stratified two-stage random sampling was employed. Interviewers administered a pretested, structured questionnaire to collect information at the household level. The analysis was undertaken for the population aged 60 years or above, and SAH was categorized by 'good health' and 'poor health'. Multivariate analyses were performed to identify significant predictors of the likelihood of reporting poor health after controlling for other variables.

A total of 30,427 elderly people aged 60 and above were interviewed. More than half of the sampled respondents were aged 60-69 years and about one out of seven were aged 80 years or above. About three in five respondents reported that their health was poor. Logistic regression analysis found that the number of chronic diseases and number of psychosocial symptoms were significant predictors in determining self-health status. Elderly respondents who had more difficulty in performing activities of daily living (ADLs) were more likely to rate their health as poor compared to those who did not have difficulty with ADLs. Number of chronic diseases was positively associated with poor self-assessed health. Elderly respondents who had one or more chronic diseases were about two times more likely to report their health as poor, compared to those who did not have a chronic disease. Moreover, respondents who had more psychosocial symptoms were more likely to report poor health compared to their counterparts. Besides these determinants, age, education, marital status, working status, and household income were associated with poor health status of the elderly.

We conclude that poor self-assessed health is high among older people in Thailand. Multiple factors contributed to determining self-assessed health among the Thai elderly; therefore, health related programmes should focus on all factors identified in this paper to improve the overall well-being of the ageing population of Thailand.

Integrative Determinants of Health Outcome among Thai Older Age Population

Kusol Soonthorndhada¹, Ramesh Adhikari and Fariha Haseen

¹ Institute for Population and Social Research, Mahidol University, Thailand;

² Tribhuvan University, Kathmandu, and Center for Research on Environment Health and Population Activities (CREHPA), Kathmandu, Nepal;

³ Health System and Infectious Diseases Division, ICDDR,B: International Centre for Diarrhoeal Diseases Research, Bangladesh
e-mail address: ¹ prkst@mahidol.ac.th

Thailand is now considered as one of the most rapidly ageing populations in Asia. The Thai people commonly suffer from hypertension, diabetes and heart disease during their elderly period of life. These chronic conditions among older persons are a major threat to the health care system of Thailand.

This study aims to examine the integrative determinants of health outcomes among Thai elderly through modified multidimensional models linking with demographic, socio-economic, health risk behaviors and biological risk factors. The study used data from the Survey of Older Persons in Thailand, 2007. A stratified two-stage random sample of 56,002 persons from this population-based study was employed to produce a nationally representative sample. The health outcome (heart disease) of older people aged 50-64 and 65-84 years, demographic variables (age, sex, marital status, education, place of residence), socio-economic status (income, working status), health risk behaviors (drinking alcohol, smoking, exercise, eating vegetables), accidental fall, functional status (composite index of ADL), psychosocial factor (composite index of psychosocial symptoms) and health care utilization were assessed by using multivariate analysis to identify significant predictors of the likelihood of reporting having heart disease.

Findings show the top three chronic diseases found among Thai older people were hypertension (27.5 %), diabetes (11.9 %) and finally heart disease (6.1 %). Models of logistic regression compared between the younger age group (50-64 years) and older age group (65-84 years) found that, among those aged 50-64 years, sex was significant, and females were 1.3 times more likely to have health outcomes of heart disease than males. Among health risk behaviours, respondents who were regular smokers were 1.5 times more likely to have heart disease compared to those who did not smoke. As regards of biological risk factors, those who had hypertension and diabetes were respectively, nearly 3 and 2 times more likely to have heart disease than those who did not have these conditions. Among older respondents (65-84 years) those who smoked regularly were nearly 2 times more likely to have heart disease compared to those who did not smoke. The poor and those who were still working were less likely to have heart disease than the rich and those who did not work, respectively. Respondents who had biological risks of hypertension and diabetes were respectively, 2.7 and 1.7 times more likely to have heart disease compared to those who did not. Moreover, respondents in both age groups who had heart disease were more likely to have accidentally falls, difficulty in three or more ADL and five or more psychosocial symptoms than those who did not have heart disease.

To conclude, individual biological risk factors namely, hypertension and diabetes are the most important factors affecting health outcomes of heart disease, and are more likely to affect heart disease than health risk behaviour. Pre-elderly age screening for hypertension and diabetes, increasing awareness about anti-smoking, and preventing accidental falls should be preventive measures under intervention programmes for reducing heart disease among Thai older population.

Do Birth Preparedness and Complication Readiness affect Utilization of Obstetric Care during Pregnancy Complication? Findings from Allahabad District of Uttar Pradesh

Lakhan Singh

Tata Institute of Social Sciences, Mumbai, India

e-mail address: lakhaniips@gmail.com

Maternal mortality is a substantial burden in developing countries. More than half a million women die due to pregnancy and childbirth related complications. Ninety-nine percent of these deaths occur in less developed countries. India alone accounts for about a quarter of the global maternal deaths; one in 48 women in India die from maternal causes. Among all Indian states, Uttar Pradesh accounts for one of the highest maternal mortality rates. In order to reduce maternal mortality, Birth Preparedness and Complication Readiness (BP/CR) matrix has been promoted as strategy to reduce delays responsible for maternal mortality and to improve the use of skilled providers at birth, a key strategy to reduce maternal mortality. There is a paucity of studies in India on BP/CR and its impact on utilization of health services. With this in view, the present study aims to determine the predictors of BP/CR and how BP/CR elements affect the utilization of obstetric care services. The study was carried out in six villages of Allahabad district on 400 currently married women who had faced obstetric complications during their last pregnancy. Findings highlight that women's pregnancy intention, number of children ever born and couple education were strong predictors of BP/CR. Essential elements of birth preparedness were found to be significantly associated with utilization of obstetric care services, and women who had a high level of birth preparedness and complications readiness before giving birth were significantly more likely to utilize obstetric health care services than women who had a low level of birth preparedness. These findings highlight the significance of messages promoting birth preparedness and complication readiness among expectant women and suggest their use as an important tool for increasing the utilization of health care services for complications of pregnancy and to reduce the maternal mortality.

Decomposition of Life Expectancy at Birth by Causes of Death in Iran

Majid Koosheshi¹ and Mahdi Sasanipoor

University of Tehran, Iran

e-mail address: ¹kooshesh@ut.ac.ir

During the second phase of epidemiological transition, life expectancy at birth was a good summary indicator of mortality. Mainly due to the decline in under-five mortality in Iran, the life expectancy at birth is approaching 72. However, this escalating trend has slowed down mainly because of deaths due to traffic accidents, since most of the deaths due to this cause occur among people aged 40 or younger. Using the life table technique, we compared the potential increase in life expectancy at birth by eliminating deaths due to traffic accidents with that of eliminating deaths due to cancer and cardiovascular diseases. Using MOHME's data on cause specific death registry, multi decrement life tables were constructed for decomposition of traffic accidents, cardiovascular and cancer related effects. Results indicate that death due to traffic accidents account for about 20% of total deaths in the country. The rates for cardiovascular diseases and cancer are about 41% and 11%, respectively. Increase in potential life expectancy by controlling for traffic accidents was 4.6 years compared to 5.1 for cardiovascular diseases and 1.03 for cancers. While the apparent potential increase in life expectancy due to cardiovascular diseases is higher than traffic accidents, because of the age structure effect, the potential increase in life expectancy due to traffic accidents is much more significant due to its socio-economic and quality of human capital consequences. The subject we are talking about is a significant and continuing debate in the literature.

Assessment of Disability Prevalence by using Iran's Population and Housing Census Data, 2006

Mehri Shams Ghahfarokhi¹, Mohammad Mirzaie and Faride Shams Ghahfarokhi

Department of Demography, University of Teheran, Iran

e-mail address: ¹ mehri_shams2001@yahoo.com

The aim of this article is to assess disability prevalence in terms of age group, sex, residence status (rural, urban, and nonresident), province, type and number of disability. The method used is a descriptive and analytical study of cross-sectional disability data collected by the Statistical Centre of Iran. Results show that people with disability comprise 1.4% of the population of Iran of which. People with one, two and three or more types of disability are 1.16%, 0.2% and 0.08%, respectively. The number of people with disability increases remarkably with age. Disability prevalence rate in Iran is 1.78%. Further, the highest rate of disability prevalence was observed in cases of mental disorder; after that leg impairment, speech and voice disorder, hand impairment, torso impairment, blindness, deafness, leg amputation and hand amputation, in order, allocated the most to disability prevalence in the country. Khorasan with 2.5% has the most disability prevalence; Gilan with 2.4% stands in the second position, and Tehran has the least rate of disability. We conclude that the high rates of disability prevalence among rural and elderly populations indicate the need for more attention and more preparation of rehabilitation services for these vulnerable groups.

Do Changing Dietary Habits Lead to Increased Prevalence of Overweight/Obesity among Indian Women?

Mohammed Shannawaz

International Institute for Population Sciences (IIPS), Mumbai, India

e-mail address: shahnawaziips@gmail.com

Overweight/obesity is a rapidly growing public health concern in India. The percentage of ever-married women aged 15-49 that are overweight or obese, increased from 11% in 1998-99 to 15% in 2005-06. An attempt is made in this paper to study the effect of changing dietary habits on the prevalence of overweight/obesity among ever married, 15-49 year-old women in India by wealth quintile, place of residence, age and other socio-economic factors, using National Family Health Survey-2 and the recent National Family Health Survey-3 data.

Results support the hypothesis that increased consumption of energy dense food results in increased prevalence of overweight/obesity. Findings showed that high energy and protein dense food consumption increased in the period between surveys. For example, consumption of pulses or beans increased from 47% to 56% between NFHS-2 and NFHS-3; while milk or curd consumption increased by 4% during the same period. Chicken/meat or egg consumption also increased significantly; consumption of eggs is often slightly less than that of chicken, meat, or fish. Results also revealed that there are substantial differentials in food consumption patterns by selected background characteristics. The odds of overweight/obesity were higher for those in the age-group 35-49 than those in the age group 15-24 in both NFHS-2 and NFHS-3. Further, women in urban areas are more likely than those in rural areas to be overweight and obese and to include every type of food in their diet, particularly nutritious foods such as fruit and milk or curd while those in urban areas are much more likely to eat fish, chicken, meat, or eggs. Women with no education have poorer and less varied diets than those with an education, and their diet is particularly deficient in fruits. Simultaneously, prevalence of overweight/obesity is also higher among women who have 12 or more years of education. Jain and Sikh women have higher prevalence of overweight/obesity although Christians are more likely than any other religious group to eat chicken, meat, fish, or eggs at least once a week; and however, although Jains and Sikhs rarely eat such foods, they are more likely than persons in any other religious group to consume milk or curd and to eat fruits at least once a week.

**“From Infectious to chronic Diseases” –
Projected incidence and prevalence of chronic disease among elderly Indians**

Debasis Barik¹ and Barsharani Maharana

International Institute for Population Sciences, Mumbai, India

e-mail address: ¹ debasisbarik25@gmail.com

A gradual improvement of the health system has resulted in an aged world characterized by a number of chronic diseases during the later ages of life. Over time, India is also experiencing an alarming spread of chronic diseases like cardiovascular diseases (CVD), diabetes, and cancer. India has the largest number of people in the world with diabetes, 38.2 million estimated diabetics in 2004. Projections of the incidence and prevalence of disease are important for public health planning. This paper tries to project the incidence and prevalence of these three main chronic diseases among the aged Indian population. The approach uses age-specific disease incidence rates together with assumptions about survival to reconstruct disease prevalence. In order to perform the calculations, data from the 60th round of the National Sample Survey Organization – morbidity and health care survey, age-specific death rates from the Sample Registration System (SRS) abridged life tables, and projected population of the Registrar General of India (RGI) expert group were assembled. The results reveal that prevalence of CVD is three times higher among the elderly in urban areas than their rural counterparts, and it is higher among the elderly in the 70-74 age group. Again, women are more vulnerable to this disease in the later ages of their life. The prevalence of diabetes is also higher among the urban elderly than their rural counterparts. Though in the earlier phase of old age, diabetes is more prevalent among women, in the later phases, men are more vulnerable. In rural areas, the prevalence of diabetes is higher among women in the 70-74 age group whereas in urban areas, it is higher among women in the 75-79 age group. Further, prevalence of cancer is higher among males in both rural and urban areas. In rural areas, the prevalence reduces among females as age increases but it increases with age in urban areas. The projection results show that around 75 million elderly will suffer from diabetes by 2026. Among them, 35 million will be from the 60-64 age group and 22 million from the 65-69 age group. Women of higher ages are two times at higher risk than their male counterparts. Around 12 million elderly will suffer from CVD by 2026 of which more than half (6.4 million) will be women.

Maternal Health Care Utilization in Context: A Multi-level Modelling Approach to Assess Community and Provider Role

Neelanjana Pandey¹ and Faujdar Ram

International Institute for Population Sciences (IIPS), Mumbai, India

e-mail address: ¹ neelanjana.p@gmail.com

Utilization of maternal health services is associated with improved maternal and neonatal health outcomes. Reducing maternal mortality is one of the key goals of the Millennium Development Goals. However, India has the dubious distinction of contributing to 25% of the global burden of maternal deaths. Thus, an understanding of the factors affecting the utilization of maternal health services is crucial. Studies examining the context within which utilization of maternal care services occurs have largely overlooked community and provider related factors. This study examines the determinants of utilization of maternal services in rural Uttar Pradesh, India, with a focus on individual, household, community and provider related factors.

The most recent District Level Household Survey (DLHS-III, 2007-08) data, available for the first time in a large scale survey in India, have been used for the study. permits the linking of different health care facility and provider related data to individual and village level datasets. . It also allows us to explore the role of the health system towards the equitable distribution of health services and their utilization. Analyses have been restricted to women who had experienced a live birth during the three years preceding the survey. In view of the nested nature of data, multilevel analytic methods have been used.

Findings indicate that more than three-fifths of the mothers had received an antenatal service at least once during their most recent pregnancy, while 27% had had a safe delivery and only 5% had received any financial assistance for delivery. Commonalities as well as differences were observed in the predictors of the three indicators of maternal health service utilization. Birth order and couple's education were the only individual-level variables that were consistent significant predictors of service utilization, while household socio-economic index and the household's source of usual health care were consistent significant predictors at the household level. At the community level, the distance of the Primary Health Centre from the village and the Village Health Worker were consistently strong predictors. On the provider front,, the presence of a lady doctor, motivation by public health officials and availability of untied funds made a significant difference in the utilization of health facilities. In contrast, some factors were significant in predicting one or more of the indicators of use but not all.

In conclusion, factors influencing the utilization of public health services operate at various levels - individual, household, community and health system. Effective interventions such as financial assistance for delivery care to promote the utilization of maternal health services should not only target individual and household factors but community involvement and provider level factors as well for improved and equitable service utilization. Such interventions should also reflect the relative roles of the various underlying factors.

Household Environmental and Individual Lifestyle Factors affecting Tuberculosis among Adults in India

Preeti¹ and Gopal Agrawal

International Institute for Population Sciences (IIPS), Mumbai, India

e-mail address: ¹pdhillon_maths@yahoo.co.in

Tuberculosis is a major public health issue and has been a great concern for the Government of India. Government has expended considerable amounts in the last few decades to control TB; the 10th Five Year Plan allocated Rs. 680 crores for the National Tuberculosis Programme (NTCP).. At the same time, India has made impressive progress in controlling tuberculosis in the last few decades. Nevertheless, the burden of tuberculosis is still very high and the elderly largely contribute to the prevalence of tuberculosis. Keeping this perspective in view, this paper aims to evaluate the impact of programme level factors with panel regression analysis at macro level. Further, it also examines the association between household level, environmental and lifestyle related individual risk factors with the prevalence of tuberculosis at micro level. A newly developed measure — population attributable fraction — was used to make estimates to quantify the contribution of various health risk factors to tuberculosis prevalence. Data for the paper were drawn from various rounds of National Family Health Survey (NFHS).. At macro level, significant temporal and spatial effects were observed on the prevalence of tuberculosis through panel regression analysis. Use of biomass fuel, tobacco and alcohol use were found to be the major contributors to tuberculosis prevalence in India, and their contribution increased with successive rounds of NFHS. At micro level, the observed decline in the prevalence of tuberculosis was concomitant with the rising inequalities in income, education and socio-economic conditions. Therefore, for promoting health for all, the Government's ongoing programmes should also include lifestyle and environmental factors, particularly for adults and the elderly.

Hypertension among Elderly Singaporeans: Findings from a National Survey

Rahul Malhotra¹, Truls Østbye² and Chetna Malhotra³

^{1,3} Health Services and Systems Research

Duke National University of Singapore Graduate Medical School, Singapore

² Community and Family Medicine, Duke University, Durham, USA

e-mail address: ¹ rahul.malhotra@duke-nus.edu.sg

Hypertension is an important yet modifiable risk factor for myocardial infarction and stroke. Elderly adults have the highest prevalence of hypertension, yet the lowest levels of blood pressure control. Singapore has one of the fastest ageing populations in Asia; its elderly population is expected to increase from nearly one-tenth of the total population, to 19% by 2030. Given the lack of information on representative estimates of, and factors associated with hypertension among elderly Singaporeans, this paper intends to estimate the prevalence of hypertension; determine the status of hypertension awareness, treatment and control; and identify the socio-demographic and health correlates of hypertension prevalence, awareness, treatment and control, among elderly Singaporeans.

Blood pressure (BP) was measured among 4,494 community-dwelling elderly Singaporeans, aged 60 years or more, participating in a nationally representative survey. Weighted prevalence of hypertension and of its awareness, treatment and control was assessed. The association of these outcomes with socio-demographic variables (age, gender, ethnicity, education, housing type, living arrangement and social participation), and health variables (body mass, diabetes and cognitive status) was assessed using logistic regression analysis.

Results show that nearly three-fourths (73.9%) of elderly Singaporeans had hypertension. Among them, 30.8% were unaware that they had hypertension, 32.0% had not undergone any treatment for it, and 75.9% had sub-optimal BP control. Further, 64.5% of those who had been treated, had sub-optimal BP control. Age, gender, ethnicity, education, housing type, body mass and diabetes were significant correlates of lack of hypertension awareness, treatment and control. Though the specific 'at-risk' sub-groups varied by outcome, males and Malays had consistently higher odds for all the three unfavorable outcomes.

Considering the high prevalence of hypertension among elderly Singaporeans, the study highlights the scope and a definite need for improving awareness, treatment, and especially, control of hypertension among this population segment, and calls for primary and secondary prevention efforts targeting the elderly and their primary health care providers, and regular data collection efforts based on representative samples.

**Chronic Diseases and Subjective Well-being Milieu:
Glum and Exasperated Results from the Kerala Institutional Aging Survey**

Sabu Aliyar Kunju

Centre for Development Studies, Thiruvanthapuram, India

e-mail address: sabualiyar@gmail.com

Chronic diseases excessively impinge on the health of the elderly and are associated with disability and devalued quality of life, besides multiplying the costs of health care. A majority of older adults have at least one chronic condition, and many have at least two or more. Moreover, depression affects older adults, but many do not receive treatment. The elderly living in institutions are more depressed and most of them express the wish to die, to die without pain, at home where they can feel the presence of their ancestors and to have their wishes respected. The focus of this paper is to explore and analyze the chronic conditions of the elderly and their Subjective well-being Inventory (SUBI). Data from the Kerala Institutional Aging Survey were analyzed for the study and the results are of concern. Cognitive problems which interfere with their skills to function independently, seriously affect their feelings of well-being, or could adversely affect their relationships with others. The proportions of chronic conditions reported by the elderly are: 42.5% arthritis, 33.3% high blood pressure, 20% diabetes, and 15.5% asthma. They have a much higher prevalence of demanding illnesses and are particularly prone to negative effects on mental health due to their poor physical condition. The elderly living in the institutional homes of Kerala indicated the following problems as analyzed by using the SUBI: feelings of worthlessness, hopelessness, helplessness, inappropriate guilt, intellectual problems such as loss of memory, inability to concentrate, confusion or disorientation, thoughts of death, aches and pains, constipation, and unexplainable physical problems. Conditions such as illness, disability, loss and loneliness were more common among them. In response to this, the public health machinery needs to ensure that elderly persons and their children have adequate knowledge and guidance to about these issues.

Decomposition of Excess Female Mortality in India

Sharmishtha Basu¹ and Shiv Narayan Sidh²

¹JawaharLal Nehru University (JNU), New Delhi, India;

²Govt College Gairsain and JNU, New Delhi, India

e-mail address: ¹basu_jnu@yahoo.com

Health is a good indicator of the well-being of the people of a country. The United Nations has used it to compute the Human Development Index. Life expectancy has been used to represent the health aspect in computing the Human Development Index. Amartya Sen (1989, 1990) 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) because female mortality rates were higher in these parts compared to those of males, indicating discriminatory behavior towards women. Working on these lines, in this paper, we would like to focus on gender differentials in life expectancy in India. At the same levels of male life expectancy, female life expectancy is higher in western countries. In the Indian context, male and female life expectancies have always been very close and clearly denote that something is working in disfavor of Indian females (UN 2006). Male and female life tables were calculated using 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 which has paired male and female tables was used to estimate expected female mortality. This expected female under-five mortality was used to calculate expected female life expectancy for all the states of India. Finally, differences were calculated from expected (life expectancy of females from West Model life table as paired with males) and actual female life expectancy. Besides, excess under-five female mortality was calculated by subtracting adjusted female life expectancy (life table calculated from substituting Coale and Demeny paired age specific female mortality for 0-4 age group) and actual female life expectancy. A look at the regional variation shows that in southern states like Kerala and Tamilnadu, women enjoy the female advantage in life expectancy while in states which are under-developed, this female advantage is absent due to socio-economic indicators which lead to female mortality at younger ages. From the findings it is evident that states like Haryana, Punjab, Uttar Pradesh, Madhya Pradesh and Bihar have higher childhood mortality (0-4 years) compared to over-five female mortality. However, Bihar (under developed) has an overall high female mortality whereas Kerala (developed) has higher over-five female mortality. The higher female mortality in the lower age group is explained by direct factors like the lower value of girl children but understanding the underlying causality of gender differentials in mortality is totally murky. Indian societal gender norms in allocation of resources, opportunities and behaviour (Klasen and Wink, 2002) are in favour of males. Data analyses have shown that mother's occupation and education are particularly important in reducing sex differentials in child mortality, through their influence on treatment seeking behaviour.

Quality of Life among People Living with HIV and Determinants: The Case of Pune City

Varun Sharma

Gokhale Institute of Politics and Economics, Pune, India

e-mail address: varun@gipe.ernet.in

The rationale behind this study is to estimate quality of life among people living and its relation to other determining socio-economic variables. Quality of life as defined by the World Health Organization (WHO), the perception of individuals of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns, is an important aspect of personification of an individual. It has been noticed that in case of people living with HIV (PLHIV), quality of life and its content suffer drastically due to HIV infection and other related determinants. This study will come up with the relationship between the quality of life aspect and its major determinants especially with reference to PLHIV in Pune city India.

The objectives of the study are: (1) To assess the quality of life among people living with HIV, as it has been noticed that their access to resources is limited and thereby their ability to have a good quality of life. (2) To analyze gender differentials in terms of quality of life among people living with HIV. The questions the study addressed are: (1) What are the determining factors for quality of life among people living with HIV?; (2) What are the main determining social, economic, demographic and clinical issues in defining quality of life status among people living with HIV?

The study is primarily based on data collected through field work. Information was gathered from a well-structured schedule filled by face-to-face interaction with PLHIV. Four hundred PLHIV were enrolled in the study. Ethical issues were well taken care of and informed consent was taken from the respondent prior to the interview. To collect information regarding quality of life of PLHIV, WHOQoL HIV-BREF was used as an instrument. This questionnaire contains thirty-one questions regarding the different aspects of an individual's life; a few questions were specifically incorporated with respect to PLHIV to capture the impact of HIV infection on QoL. The study is based on the construction of a standard of living index as suggested by NFHS-II, to capture the economic well being consideration. WHOQoL index is constructed based on the recommendations given by WHO to capture the quality of life status of PLHIV. Multiple regression analysis was used to assess the relationship between different domains of WHOQoL HIV index and other exogenous variables defined as age, gender and educational status as demographic variables, wealth index as an indicator of economic well being, and CD4 count level as a clinical variable to capture the impact of disease progression on the QoL among PLHIV. In light of this discourse, this paper identifies the main socio-economic, psycho-social and clinical determinants of quality of life among PLHIV. Empirical investigations based on the above framework are expected to give an authoritative recommendation regarding the enhancement of quality of life among people living with HIV.

Diffusion HIV/AIDS in North-East India: A Geographical Analysis

Khupmuanlal Zou

Department of Geography, North Eastern Hill University, Shillong, India

e-mail address: muanz11@yahoo.co.in

Migration, either permanent or temporary, is a geographical phenomenon that seems to be a human necessity in every age. Man has a tendency to leave areas in which life is difficult and migrate to areas where life may be easier and better. Migrants may also suffer from new infecting agents which they may carry with them from their place of origin and introduce into their place of destination. The spread of HIV/AIDS is clearly linked to rapid economic transition such as that being experienced by South Asian countries in the wake of globalization. The risk patterns are similar in almost all the North-Eastern states of India though the rates at which the epidemic has been spreading are different.

The situation in Mizoram (1072 drug deaths since the 1990s) and Nagaland is not unlike that in Manipur a few years ago. Changes such as growing social inequality, rural employment, greater poverty, increased mobility, the breakup of communities and erosion of traditional values have increased the vulnerability of large segments of the region's population to HIV/AIDS. With the movement of the people, diseases of various types also move from place to place, one of which is HIV/AIDS which seems to have no cure at least in the near future. Thus, the movement of people causes HIV/AIDS to spread and its numbers to grow faster in Northeast India and particularly in Mizoram.

**Impact of HIV Infection on the Social Capital of the HIV Infected Individual:
A Study of PLHIV in Pune city India**

Varun Sharma

Gokhale Institute of Politics and Economics, Pune, India

e-mail address: varun@gipe.ernet.in

The rationale for selecting the topic of this paper is to study the impact of HIV infection on the social capital of the HIV infected individual in particular, and their household and community in general. In layman terms, social capital is an individual's ties with the community and neighbourhood, the benefits accruing to the individual or family by virtue of the ties with society at large. HIV infection threatens these ties within the family and society at large. People living with HIV (PLHIV), experience the pain of social exclusion, within the family and society, community and neighborhood. Stigma and discrimination are important negative effects frequently experienced by PLHIV. The rationale behind this study is to capture the impact of HIV related stigma and discrimination on the social capital of individuals living with HIV infection.

The objectives of the study were: (1) to study the impact of HIV infection on the social capital of individuals living with HIV in particular, and their family and community in general; (2) to analyze the process and practice of social exclusion and gender differentials; and (3) to examine the socio-economic factors contributing to the practices of social exclusion and the coping strategies adopted by PLHIV. 3.

The study is based on primary data regarding the socio-economic conditions of PLHIV in Pune city. Data was collected, as project work for the PhD dissertation, from about 400 PLHIV and included the socio-economic conditions of their households. The study is based on the construction of Standard of Life Index (SLI) to capture economic well being considerations. Questions were asked regarding stigma and discrimination on various grounds, and their likely impact on psychological and social well being. Index of social capital was constructed on the basis of principal component analysis to capture the inclusion of PLHIV in the societal framework. Multiple regression analysis was used as a statistical tool to get better adherence to the impact of HIV infection on the social capital of PLHIV.

Multiple Morbidity in Later life

Akanksha Srivastava and S K Mohanty

International Institute for Population Sciences, Mumbai, India

e-mail address: akankshaleo@gmail.com

With demographic and economic transition, India has been experiencing a shift in disease pattern from communicable to non-communicable diseases. Increased life expectancy is burdened by the presence of “multiple morbidity” leading to “morbidity expansion”. Multiple morbidity is defined as the co-occurrence of two or more chronic conditions. It is measured with respect to the number of morbidity or disease severity. The risk of suffering from these diseases increases with age, particularly after the age of 60. Multiple morbidity in the later stages of life results due to the interaction between the various chronic diseases and loss of functional capacity. Using data from the 60th round of the National Sample Survey (NSS), this paper examines the prevalence of multiple morbidities, coexistence of selected chronic diseases and treatment seeking behaviour among the elderly in India. To examine the prevalence of multiple morbidity, five chronic diseases were identified as the most commonly occurring conditions. These diseases were hypertension, heart disease, diabetes, disorder of joints and bones and asthma. Bivariate and multivariate techniques were used for analyses.

Results indicate that about one-third of the elderly suffer from any morbidity while one in ten elderly suffer from multiple morbidity. Among the diseases, the prevalence of disorders of joints and bones is highest among the elderly irrespective of the place of residence and is followed by cardiovascular diseases which include hypertension and heart disease. The most common co-occurring multiple chronic conditions are hypertension and diabetes followed by disorder of joints and bones and hypertension. Along with other factors, age and economic status are significant predictors of multiple morbidity. The prevalence of multiple morbidity is highest among the oldest old elderly (80 years and above) and treatment seeking is lowest among them. Elderly who are fully dependent on others have higher probability of suffering from multiple morbidity. Larger differentials were observed with respect to the economic status of the elderly. Treatment seeking and cost of treatment varied largely by morbidity condition, age, living arrangement and economic dependency of the elderly. The perceived health status of those suffering from multiple morbidity was significantly poorer than that of those suffering from a single morbidity condition. Based on the results, some policy measures have been suggested such as, the health care needs of the elderly should be prioritised, taking into account their economic status and living arrangement. Subsidies should be provided in private health centres for the treatment of multiple morbidity.

Variation in Depressive Symptoms by Living Arrangements and Social Networks among older Singaporeans

Rahul Malhotra¹, Angelique Chan² and Chetna Malhotra³

^{1,3} Health Services and Systems Research,

Duke National University of Singapore Graduate Medical School, Singapore

² Sociology, National University of Singapore, Singapore

*e-mail address:*¹ rahul.malhotra@duke-nus.edu.sg

Depression is an important health condition among older Singaporeans; surveys indicate that 5-6% suffer from depression and 13-22% from depressive symptoms. While several studies from Singapore have examined the biological risk factors of depression and depressive symptoms, very little is known about their relationship with living arrangements and social networks.

This paper examines the association between living arrangements and social networks outside the household and depressive symptoms among older men and women, and investigates whether the association of living arrangements with depressive symptoms varies by strength of social networks.

Data for 4,489 community-dwelling Singaporeans, aged 60 years and older, drawn from a nationally representative survey conducted in 2009 were analyzed. Depressive symptoms were assessed using the 11-item CES-D (Center for Epidemiologic Studies) scale, social networks with Lubben's revised social network scale, and living arrangements using household composition. Analysis was stratified by gender, and descriptive and multivariate statistics were used to assess the risk of depressive symptoms by living arrangements and social networks, adjusting for possible confounders (age, ethnic group, educational status, type of housing, presence of functional limitations, number of chronic diseases and involvement in social activities).

Findings show that women had higher scores of depressive symptoms than did men. Living alone and living only with children (relative to living with spouse and children), and weak social networks outside the household were associated with higher scores of depressive symptoms among both men and women. Further, men living alone with weak social networks outside the household had higher scores of depressive symptoms than those with strong networks. The findings have implications regarding the importance of strengthening non-familial social networks of older adults, particularly of those living alone.

A Study on Demographic and Socio-economic Characteristics of the Handicapped Population in Iran

Ali Pezhhan¹ and Mohammad Ameli Khoraskani

Department of Demography, University of Kerala, Thiruvananthapuram, India

e-mail address: ¹pejhan_ali@yahoo.com

Handicap is a phenomenon which has been with mankind for ages and has experienced a historical ever increasing process. Handicap is a deprivation and a non-proper condition that is the consequence of a defect or impairment.

Handicapped individuals are an undeniable part of any society and should not be treated with discrimination but rather, like other members of the society. They should enjoy the same rights for leading a normal life; rights such as having access to health services, and equal education and employment opportunities and so on. In order to plan for the handicapped, we need to have information and proper analysis of the status and conditions of this group of people in our society. Available information indicates that currently there are about 600 million handicapped individuals in the world. According to census data by SCI (Statistical Center of Iran), about 1.4% (1,012,222) handicapped individuals live in Iran.

Iran has experienced an eight-year war with Iraq and one of consequences of the war was handicaps and injuries among the Iranian population. Handicap statistics are collected for policy making and research purposes as well as monitoring and evaluation of plans and projects. Handicap statistics based on their coverage and modules of data items can offer a wide range of useful information for policy makers. For instance, cross-tabulations on prevalence of handicap with socio-demographic features can demonstrate the differences among different age, sex, education and employment groups. Car accidents and other incidents are the major cause of handicap in Iran. In addition, the incidence of handicaps among children born to older mothers increases.

The objectives of this study are: (1) to study the demographic profile (including sex ratio, age) of the handicapped population by type of handicap; (2) to study the socio-economic features of the handicapped by type of handicap; (3) to compare various development indices of the handicapped with the standard indices available for the country, and (4) to study the relationship between types of handicap and levels of development in the states of Iran. The documentary method and secondary data will be used for the study.

Health Effects of 2005 Yangyang Forest Fire in South Korea

Deasung Choi

School of Public Health, Seoul National University, Seoul, Republic of Korea

e-mail address: dssaga@naver.com

There are a number of studies on forest fires in Korea. However, most of them have focused on the damage of land, trees, and air biomass after the forest fire. There has been little research on how smoke and ash derived from forest fires affect the health of people in communities located near or far from the site of fire. In 2005, there was a huge forest fire in Yangyang that burned about 29,000 hectares and generated smoke and ash that spread over a large area due to strong wind streams. Given the findings from numerous international studies on this issue, it is not difficult to expect that Yangyang forest fire has a substantial and long-term health effect on residents near and far from the fire site. This study examines the effects of direct and indirect exposure to the smoke and ash produced by Yangyang forest fire on adverse health outcomes in Korea. This paper pays particular attention to the differential health outcomes to the same exposure to forest fire hazards by socio-economic status of individuals.

A time-series analysis was conducted to investigate the short- and long-term health effects of the forest fire. The national health insurance data for associated morbidity analysis and the national death files for mortality analysis were utilized. The extent of the health effects of the forest fire by distance and time, was assessed by using the chronological direction and strength of the wind stream.

The study anticipates the following results: Smoke and ash derived from Yangyang forest fire will be associated with increased respiratory diseases and associated deaths. Such effects will not be limited to residents near the fire site. Rather, community residents along the wind stream, regardless of the physical distance will also suffer from similar diseases. There will be long-term effects of the forest fire, since respiratory diseases are cumulative. Furthermore, the adverse outcome will be more pronounced among those with low socio-economic status because low socio-economic status is associated with increased vulnerability to the ambient biomass. Results from this study will help us better understand the adverse effects of forest fires on individual health.

Gender Differentials of Vaccination Coverage in Zone Eight of Dhaka City Corporation

Md. Rezaul Karim¹, Md. Mahmudul Haque and Md. Rizwanul Karim

National Institute of Preventive and Social Medicine (NIPSOM), Dhaka, Bangladesh

e-mail address: ¹drr_karim@yahoo.com

Over the last century, vaccines have become one of the most powerful tools for preventing infectious diseases. About 3,000,000 children under 5 years of age die in Bangladesh of which about 75% die before completing one year, and 50% die in the neonatal period. However, the truth is that most of these deaths are preventable with low cost interventions such as immunization. Vaccination, however, should not be considered as an end in itself. The accurate measurement of vaccination coverage is, therefore, an essential step in determining expected reductions in morbidity and mortality due to vaccine preventable diseases. It is one of the ways of evaluating the effective operation of the programme. A coverage evaluation survey thus, provides important information about the spread of vaccination.

The objective of this study was to assess gender differentials in vaccination coverage among 12-23 month-old children in Zone-8 of Dhaka City Corporation. Thirty clusters were randomly selected from a list of local areas in Zone 8 by probability proportion to size sampling. A total of 210 children were studied using a pre-tested structured questionnaire.

Findings showed that the routine immunization coverage in the study area among the children by card and history was 97% for BCG; 71% for DPT1, OPV1, and Hepatitis B1; 66.7% for DPT3, OPV3, and Hepatitis B3, and 63% for Measles. Only 60.3% of the boys and 66.7% of the girls surveyed had received valid doses of all vaccines by 12 months of age (fully immunized child). Programme access as measured by crude DPT1 coverage was better in the study area (97%). There was no significant difference in card retention rate among boys and girls (76.86% versus 76.25%). Invalid DPT (1, 2, or 3) doses were given to 2% of vaccinated children, 3.2% of Measles doses were invalid; major causes for invalid doses were due to the card being lost and then, for giving a tick mark in the card instead of writing a valid date. Dropout rates for DPT1-DPT3 and DPT1-Measles were almost similar among boys and girls; 7.3% and 7.4% respectively, for DPT1-DPT3, and 12.2% and 11.1%, respectively for DPT1-Measles. Major reasons given by parents for never vaccinating their children (zero dose children) were 'immunization not important' (33.3%) and 'fear of adverse reaction' (33.3%) while major reasons for incomplete vaccination were 'immunization not important' (25%) and 'child was sick and not taken to immunization center' (25%). There was no significant difference in access to immunization between girls and boys (97.6% versus 96.4%). Also, there was no significant gender difference among card retention rates and dropout rates.

To conclude, the findings of this study reveal that access to child immunization is good. However, high drop outs and invalid doses reduce the percentages of fully immunized children to 63%, which suggests that effective monitoring is essential for reducing drop outs from BCG to DPT1 at the initial stage and for increasing valid coverage of fully immunized children.

When will they Ever Learn? The Great Indian Experience of the Universal Immunization Programme

Nilanjan Patra

JawaharLal Nehru University (JNU), New Delhi, India

e-mail address: nilanjanpatra@gmail.com

The Universal Immunization Programme (UIP), a carefully planned strategy launched in 1985-86, aimed to cover all children by 1990. In India, under the UIP, vaccines for six vaccine-preventable diseases (tuberculosis, diphtheria, pertussis (whooping cough), tetanus, poliomyelitis, and measles) are available free of cost to all. Considerable effort and funds has been spent on the UIP but several survey results testify to a glaring gap between the goals aspired for and the targets touched. Given the supply-side constraints in terms of tight budgetary allocations for the health sector and evaporating international assistance, the present study looks at the effectiveness of the Programme from the demand side. The study attempts to analyze the effects of selected demographic and socio-economic predictor variables on the likelihood of immunization of a child for the six vaccine-preventable diseases covered under the UIP. It focuses on immunization coverage in the whole of India with special emphasis on three groups of states, namely, Empowered Action Group, North-Eastern and Other States. The study applies a logistic regression model to the three rounds of National Family Health Survey data. The results are robust across different models. The likelihood of immunization increases with urban residence, mother's educational level, mother's age, mother's exposure to mass media, mother's awareness about immunization, antenatal care during pregnancy, wealth index, household electrification, mother's empowerment index, and caste/ tribe hierarchy. It is also higher for boys than for girls but it decreases for higher birth-order children irrespective of the sex of the child. However, SLI and sex of household headship have no effect. Religion and zone of states also have some effect. Emphasis on these demand-enhancing factors is necessary to make the immunization programme justly universal.

A Study of the Sanitation Environment in Slums and Prevalence of Diarrhoea

Bornali Dutta¹ and Chandrashekhar

International Institute for Population Sciences (IIPS), Mumbai, India

e-mail address: ¹ duttabornali@gmail.com

A sanitary environment plays a vital role in ensuring the health of children especially in the slums. A review of the literature on slums clearly show that slums have been predominantly viewed as social disorganizations with unhygienic living conditions. Under the circumstances, the health of children is at a huge risk, especially when it is seen in terms of diarrhoea. Hence, given the intimate link between sanitary environment and health, this study tries to see the effect of a sanitary environment on the prevalence of diarrhoea. Specifically, it attempts to study the sanitary environment in the slums of urban India and its eight selected cities. At the same time, it aims to find out the prevalence of diarrhoea and its determinants in the slums of these cities.. The study also estimates the effect of a sanitary environment on diarrhoea among children less than five years of age.

The analysis is based on 5,019 children aged 0 to 4 years included in India's National Family Health Survey (NFHS-3) conducted in the year 2005-06. Bivariate analysis was conducted to visualize the sanitary environment of slums,. Sanitary environment includes source of water, type of toilet facility, toilet facilities shared, and stool disposal practices of the youngest child. Logistic regression analysis was used to estimate the effects of a sanitary environment on the prevalence of diarrhoea. Different models were run to see the independent effect and controlled effect of household environment and other related factors on diarrhoea.

Findings reveal that a high prevalence of diarrhoea in the slums of cities like Delhi, Indore, Meerut and Nagpur. The logistic regression analysis is based on children under age five. Model I includes variables of sanitary environment, which includes source of drinking water, type of toilet facility, toilet facility shared and stool disposal practices of the youngest child. Model II includes age of the child, sex of the child, nutritional status of the child, birth order and number of children below five years of age as additional controls. Model III additionally controls mother's education, father's education, working status of mother, mass media exposure, religion and caste/tribe. The final Model includes household characteristics. Model I shows that the odds of having suffered from diarrhoea are almost one and half times higher among children living in households using 'not improved toilet facility' and among children where stool disposal of youngest child 'is not safe' compared to those living in households using improved toilet facilities and safe stool disposal practices. In the final Model, the effect of improved toilet facility was reduced slightly when additionally controlled for all other characteristics. From the analysis it becomes clear that, among other factors, the prevalence of diarrhoea is high where type of toilet facility is not improved and stool disposal practices are not safe.

Men's Knowledge, Attitude and Practice Towards Contraception In Bihar

Debashrita Chatterjee

JawaharLal Nehru University (JNU), New Delhi, India

e-mail address: dchatterjee76@gmail.com

This paper attempts to analyze the knowledge, attitude and practice towards contraception of men in Bihar, in relation to certain background characteristics. Data for the study were taken from the National Family Health Survey, NFHS-3 (2005-06), India, and univariate, bivariate and multivariate analyses were conducted.

Findings of the analyses showed that 98.7% of men aged 15-54 know about a contraceptive method, and while about 45.6% believe that contraception is not a woman's business, 54.4% percent agreed to the statement that 'contraception is a woman's business; a man should not worry'. As regards practice, only 21% percent of men had used a method the last time they had sex with their partner, whereas 79% had not used any method. Multivariate analysis conducted to examine the net effect of background characteristics on dependent variables, showed that men who had a secondary education, were more likely to have knowledge about contraception than those without any formal education. In case of religion, Non-Hindus were 0.34 times less likely to have knowledge compared to Hindus.

Men's attitudes to contraception may influence their partner's attitude and eventual adoption of a contraceptive method. It was observed that men living in urban areas were less likely to disagree with the statement that 'contraception is a woman's business; a man should not worry.' However, Non-Hindu men were 1.43 times more likely to disagree with it than Hindu men. Men who had attained secondary or higher education or had been exposed to family planning messages on television were also more likely to disagree with the statement than those without any formal education or exposure to such messages, respectively. With respect to contraceptive practice, men with secondary and higher levels of education were more likely to have used a method the last time they had sex with their partner. Similarly, men who were engaged in an occupation or had been exposed to family planning messages on TV were more likely to have used a method the last time they had sex with their partner compared to those who were non-workers or had not been exposed to such messages, respectively.

Hence, we conclude that men in Bihar are aware of contraceptive methods but their attitude needs to be changed so that it ultimately has a positive impact on contraceptive practice. In the long term, education and involvement in an occupation play an important role but in the short term, the mass media plays an important part.

Millennium Development Goal Five on Maternal Health in Indonesia, 2007

Irma Ardiana¹ and Gouranga Dasvarma²

¹ National Family Planning Coordinating Board, Jakarta, Indonesia,

² Flinders University, Adelaide, Australia

e-mail address: ¹ irma_ardiana@yahoo.com

Maternal mortality in Indonesia is very high compared to global and ASEAN regional levels. The Government of Indonesia has joined many other countries in adopting the Millennium Development Goal 5 (MDG 5) to improve maternal health along with striving to achieve other developmental goals. However, if the current annual rate of change in maternal health measures is disaggregated to urban-rural levels, it can be seen that the progress towards MDG 5 has been different in these areas from that achieved at the national level. Furthermore, little is known about the factors which significantly affect the achievement of the current progress in the maternal health indicators between the urban and rural areas of Indonesia.

Prompted by the uneven achievement in meeting the maternal health goal in urban and rural areas of Indonesia, the present study aims to investigate the factors contributing to such variations in meeting MDG 5 and provide an evidence-based approach for suitable policy designs.

This study is based primarily on an original analysis of data derived from the Indonesian Demographic and Health Survey 2007 (IDHS 2007). Two maternal health indicators have been selected for analysis, namely: (i) the proportion of deliveries attended by skilled birth attendants (SBAs) and (ii) fertility, measured by the mean number of children ever born (CEB). The data have been analyzed in three stages - descriptive, bivariate and multivariate analyses. The analysis involves the proximate and distant variables in each of the two indicators chosen above.

The findings of the present study confirm that rural women in Indonesia have a statistically significantly lower chance of having their deliveries attended by SBAs compared to their urban counterparts. The factors which contribute to a high predicting power of the chances of deliveries attended by SBAs include place of delivery and whether or not a woman has received antenatal care (ANC) from a health provider. With respect to the second maternal health indicator, fertility, it is found that rural women tend to have a higher mean number of CEB. Age at marriage, contraceptive use, women's age, women's education, ideal number of children desired by a woman and the quality of family planning services are the factors significantly associated with the difference in CEB between urban and rural areas. The multivariate analysis indicates that a woman's desired number of children has the strongest influence on the larger mean CEB in rural areas and a delay in women's age at first marriage has been found to be the primary factor in the smaller CEB in urban areas.

Based on the findings mentioned above, strategic and appropriate policy and research implications are discussed.

Determinants of men's extramarital sexual experience in the Philippines

Jeofrey Abalos

Demographic Research and Development Foundation, Quezon City, Philippines

e-mail address: abalosjb@gmail.com

Men who engage in unprotected sex outside marriage facilitate the transmission of sexually transmitted diseases because they act as a bridge between the outside world and their household environment. In the Philippines it is likely that extramarital sexual experiences of men are unprotected since condom use is less than five percent; hence, they are at heightened risk of contracting sexually transmitted infections. This paper aims to determine the level of extramarital sex among Filipino men and identify the factors associated with Filipino men's extramarital sexual activity using the 2003 Philippine National Demographic and Health Survey (NDHS) male subset. Binary logistic regression is employed to identify which of the explanatory variables best predicts the likelihood of engaging in extramarital sex among Filipino men. Results show that 21% of Filipino men in unions have had extramarital sexual experience. Filipino men who have engaged in sex at a younger age, who are incapable of having another child, have been drunk in the three months preceding the survey, are more likely to engage in extramarital sex than their counterparts. In addition, those who are Muslim, have a low level of education, and are legally married are less likely to engage in extramarital sex than their counterparts. These findings underscore the health threats Filipino men may be facing because of their risky sexual activity. The risk is further compounded by other sexual and non-sexual risky behaviors that are found to be associated with their extramarital sexual experience.

Reproductive and Sexual Health Problems Reported by Bangkok's Telephone Hotline

**Khemika Yamarat¹, Chongkol Tangusaha, Montakarn Chuemchit, Nuchanad Hounnakklang,
Onuma Zongrum and Piyalamporn Havanond**

College of Public Health Sciences, Chulalongkorn University, Bangkok, Thailand

e-mail address: ¹khemika.y@chula.ac.th

The objective of this paper is to examine reproductive and sexual health problems reported by Bangkok's telephone hotline which provides counselling services. This descriptive study uses data recorded by the hotline telephone counseling service in 2008. Data was collected by the Hotline Counseling Center, College of Public Health Sciences, Chulalongkorn University, Thailand. The Centre has been operating since 1996 to support the general public, as well as students having problems with sexuality and sexual health. The service is available free of charge. Results included 1,282 case contacts made to the hotline, especially by persons who want to remain anonymous when talking about their sexual problems rather than discussing them face-to-face. This protects the client's privacy and confidentiality. The analysis found that a considerable proportion of people (60%) who consulted the service were males between the ages of 13-72 years, with an average of 28.8 years; 39% of 1,282 cases were female. The majority of males reported sexual problems related to sexual intercourse/sexual relationships (31%), and sexual deviation (17%). Most females reported problems related to pregnancy (26%), family and relationships (17%), contraceptives (15%) and sexual intercourse/sexual relationship (9%). Sexual intercourse problems included sexual dysfunction such as erectile dysfunction, premature ejaculation, unbalanced sexual desire, sexual response/ arousal/ stimulation problems, as well as orgasm. Problems among adolescents below 20 and people between 20-29 years were primarily about pregnancy, representing 33% and 21%, respectively. Among those between the ages of 30-39 years, problems related to sexual intercourse were the primary concern (31%). Males and females who composed the middle aged group between the ages of 40-59 years, were primarily concerned about family problems and their relationships including conflicts and communication. Persons 60 years of age and older were primarily concerned about their family and sexual intercourse. The results when compared with those of the previous decade did not show a significant difference regarding clients' knowledge, beliefs and behaviors being inadequate for their situation. The difference was only in the information source providing the telephone numbers for the service. Throughout the past 10 years, most people learned about the service through different kinds of mass media such as newspapers, magazines, TV and radio. However, now most people learn about the service from the internet and other hotline services. The findings draw the attention of policy makers to improve and increase such counseling services which will ultimately reduce sexual health vulnerability and high risk behaviors especially among Thai youth and adolescents.

Knowledge, Perceptions on Male Menopause among University Professors and its Social, Psychological and Health Causes and Consequences

P Vinayaga Murthy and V K Ravindra Kumar

Sri Venkateswara University, Tirupati, India

e-mail address: ¹ ravindrakumar.vk@gmail.com

'Male Menopause' is a concept which plays an important role in the health and wellbeing as well as sexual function of men. In the recent past, it has been the subject of increasing global attention both among medical and social researchers. Male menopause is something that many doctors and the highly educated in India have not heard about. It is related to testosterone deficiency in middle aged men, especially after 40, and is associated with a decline in sexual urge and erectile dysfunction. It also leads to fatigue, forgetfulness and anxiety, weight gain, indecisiveness and declining self confidence, and ultimately, to what is called 'midlife crisis'. Many males never get diagnosed or treated for male menopause because until now it has been in the closet. However, it can be diagnosed by checking testosterone levels using a blood test. A study conducted in USA highlighted that more than 25 million men are now passing through male menopause and 52% of men between 40 and 70 suffer from varied degrees of erectile dysfunction (J Diamond, 1998).

Though the problem of male menopause is growing globally, in Asia and especially in India, much research has not focused on the complex issues related to it. Moreover, though studies have been conducted in Europe, the majority have followed a medical/clinical approach, and only a few have studied the psychological, familial and career/work related influences of male menopause. Midlife is a very crucial phase for males as they have to decide not only about their own career but also their children's careers. The condition is even more crucial among University professors as they are the agents who impart knowledge and build up the careers of their students. Almost all professors who are engaged in teaching, research and extension may experience symptoms of male menopause. However, most of them are not aware of its symptoms and underlying causes, and many are unaware of treatments like 'Testosterone Replacement Therapy' and lifestyle changes to cope up with the midlife crisis. Hence, there is a great need to study the social and psychological causes and consequences of male menopause and educate University teachers on how to prevent, delay, reduce or eliminate its..symptoms..

One hundred professors above 40 years of age were purposively selected for the study which focused on the following aspects: (1) awareness and perceptions of respondents about the onset of male menopause, its causes and consequences; (2) impact of lifestyle factors on the early onset of male menopause; (3) linkages between certain diseases and male menopause; (4) impact of ageing and degeneration of the body and hormones on sexual behaviour; (5) a comprehensive effort to study the general 'life satisfaction' of the respondents, and 6) development of appropriate three point scale indices for patterns of sexual behavior, level of experience of male menopause, work patterns, maintenance of family relationships, and level of satisfaction regarding social status, in relation to male menopause. Based on the results, the paper presents policy implications and a few recommendations.

Utilization of Reproductive and Child Health Care Services in 'BIMARU' States in India

T Pugalenti and K Jothy

Department of Population Studies, Annamalai University, Tamil Nadu, India

e-mail address: ¹ pugalevelu@gmail.com

Reducing maternal mortality increasing the utilization of reproductive and child health (RCH) services are major MDGs for the world and India. The mission of this goal is to improve availability, access, and quality of health care personnel, especially for those residing in remote rural areas, the socially and economically poor, and women and children. The increase in facility based deliveries has been dramatic among eligible women. Every fifth child that dies in India may be due to improper utilization of RCH services. There are huge gaps in the utilization of RCH services between the 'BIMARU' states in India (Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh) and the nation. This study was carried out (1) to examine the utilization of RCH services of currently married women in the BIMARU states; (2) to analyze the association of socio-economic and demographic characteristics and the utilization of RCH services by currently married women, and (3) to make some policy implications to increase the level of utilization of RCH services among currently married women.

Data for the analysis were drawn from the National Family Health Survey-3 (NFHS-3) conducted in 2005-06. Currently married women who had given birth to a child in the three years prior to the survey were selected for the analysis. The total sample of women from the BIMARU states was 26,320 of which 19,932 were currently married women. Of these, 7158 women had had one to four births in the three years prior to the survey and were considered for the analysis. The extent of utilization of antenatal, natal and postnatal services by the mothers was analyzed with the use of appropriate statistical tools.

The analysis revealed that education, ethnicity, wealth index and place of residence considerably influenced utilization of RCH services of currently married women in these states. It is suggested that: (1) women should be encouraged to make use of the free services available at the subcentre and PHC level to promote RCH; (2) health education camps should be organized in rural areas of these states to increase awareness of maternal and child health services among married women in these areas, and (3) government and non government organizations working in rural areas should be encouraged to promote awareness of RCH services.

**Awareness of Reproductive and Sexual Health Services at Public Health Facilities
among Men in Tamil Nadu**

Ramesh Chellan

GfK

e-mail address: rameshchellan@gmail.com

In recent years, Reproductive Tract Infections/Sexually Transmitted Infections (RTIs/STIs) and Human Immunodeficiency Virus/Acquired Immuno Deficiency Syndrome (HIV/AIDS) have become major public health concerns in developing countries, including India. This paper examines the effect of socio-economic, demographic and community factors on the awareness about reproductive and sexual health (RSH) services available at primary health facilities among rural men in Tamil Nadu, India. The study was conducted on awareness and perceptions about RSH problems and awareness of RSH services available at public health facilities from a sample of 343 men, aged 18-54 years, selected by systematic stratified sampling. To estimate the net effect of each variable on the likelihood of awareness of RSH services at public health facilities, logistic regression model was applied. Results reveal that about half of the respondents were aware of the availability of RSH services at public health facilities, followed by RTI/STI services (40.5% percent), and HIV/AIDS test services (49.9%). Results of logistic regression analysis show that men with six and above years of schooling, those with a high standard of living, those who watch films frequently, those who have full exposure to mass media, and unmarried men are significantly more likely to be aware of such RSH service facilities. In addition, those from villages near the district headquarters and those living in villages with more frequent bus services are significantly more likely to be aware of such services than those from remote villages with less frequent bus services. In order to orient this study towards ways forward and policy implications, one can prioritize the determinants such as those indicated here. Education up to a certain standard, vicinity near a district headquarters, and an economic criterion through a proxy indicator of standard of living can be measured on a comparative level to assess which of these are strong determinants and to what extent they exert an influence on awareness levels. Thus, this study draws attention to the imminent need to concentrate on areas that should be the priority of planners to register upward trends in perceptions and knowledge about these health facilities.

Analysing Women's Reproductive Health Outcomes through a Rights Perspective: The scenario in India

Tapati Dutta¹ and S K Mondal²

¹International AIDS Vaccine Initiative, New Delhi, India;

²Population Foundation of India, New Delhi, India

e-mail address: ¹ dutta1108@gmail.com

Right to health is a human right encompassing sexual and reproductive health. At the ICPD in Cairo (1994), the setting for reproductive health in a rights perspective was conceptualized putting reproductive health rights explicitly in the platter of the development agenda. Treaties with similar essence were the Bali Declaration (1992), UN Human Rights Conference, Vienna (1993), CEDAW (1993) and the Fourth World Conference on Women, Beijing, 1995. However, well before the Cairo conference, India had already started to evolve its programme direction by moving beyond demographic targets to quality care. With the National Population Policy (2000), Reproductive and Child Health Project (2005-2009) and the National Rural Health Mission (2005-2011), there has been increasing recognition of interventions to ensure quality reproductive health services emphasizing on equity parameters. Similar essence has been evident in the five year plans, wherein the RH/FP programme metamorphosed from a clinical-target oriented approach to a more integrated, decentralized one, with flagship programmes customized to reach out to the vulnerable, especially women. However, in spite of policy level commitments there continue to be significant gaps and persistence of unsafe or unwanted RH/FP outcomes, whose roots lie in addressing women's reproductive rights. The family planning scenario is featured by inadequate knowledge of FP services, high unmet need, feminization of RTIs/STIs, HIV/AIDS. Added to socio-cultural determinants like early marriage, childbearing, women's inability to negotiate safe sex, lack of inter-spousal communication, fear of physical violence etc. there are lapses in service delivery and RH/FP information by service providers. Therefore, in the discourse for realization of sexual and reproductive health rights, it is pertinent to understand the degree of access of rights by women in a patriarchal society and the correlation between lack of these rights in the social system within which they are exercised.

The objective of the paper is to analyze the extent of violation of women's sexual and reproductive health rights owing to socio-cultural norms and inequities in service delivery and its trends. This paper attempts to analyze the issue in the context of India using RH/FP outcomes from NFHS data. Findings show that despite enormous efforts towards communitization of quality RH/FP services, only 28% of women are informed about contraception; 21% of all pregnancies are mistimed and unwanted; And, delay and spacing desires of 86% of women remain largely unsatisfied. Further, the difference between total wanted fertility rate and TFR has risen from 0.72 to 0.8 between NFHS2 and -3. While the unmet need has reduced marginally (15.8% to 13%), future fertility preference of women has varied slightly. Findings also reveal that 58% of adolescents are married, 12% are mothers and 4% already pregnant. Age of female sterilization has successively declined to 25.5 years all vouching for high incidence of early marriage, childbearing and lack of spacing. One-third of women are exposed to violence by their partners during pregnancy. Backed by the international human rights treaty system and national programmes and policies thrusting on equity rather than parity, a rights-based approach can challenge the status quo and address governments to work proactively for better reproductive health outcomes.

South-South Cooperation for Scaling up Reproductive Health in Developing Countries

S M Shariful Islam

Ministry of Health and Family Welfare, Dhaka, Bangladesh

e-mail address: drsislam@gmail.com

Reproductive health (RH) problems remain a major barrier to health care and achieving the Millennium Development Goals (MDGs) in developing countries. With increasing demand for RH services and decreased support from donors, developing countries need to find a solution to this crisis. South-South Cooperation at all levels is an important instrument of development that stems from the premise that there is a wealth of knowledge, expertise and capacity among developing countries to accomplish much more than they can individually achieve. In a scenario where resources — whether financial or technical — are really scarce, such collaborative efforts can unlock resources. Partners in Population and Development (PPD) has been playing a proactive and facilitating role in scaling up reproductive health in developing countries through South-South Cooperation.

Through long-term bi-lateral and multi-lateral relationships which permit implementation of a mix of modalities for deriving optimal benefit, South-South Cooperation promoted sharing of knowledge and expertise among its member states, launching of inter-country projects, training and fellowships, and research and documentation involving member as well as non-members. South-South Cooperation (SSC) increased advocacy, capacity building, networking and partnerships among Governments, NGOs, UN organizations and other stakeholders. Among lessons learned are: although much has been achieved as a result of SSC, much more needs to be done; in order to achieve stronger results in developing countries, we must strengthen the link between national, regional and global levels, paying due attention to sub-regions, and finally, we must work together as one team.

Results indicate that PPD members' commitment to South-South collaboration was strengthened through the Regional Reproductive Health Networks and exchanges of expertise carried out in the form of policy dialogue, training and joint projects. PPD offered more than 300 Fellowships to its member countries and developed a pool of 200 Consultants and 1000 Leaders in Reproductive Health, Population and Development who were trained in the developing countries. Partnerships were developed as long-term arrangements between governments, UN organizations, research institutes, donors and NGOs. Over the years, PPD has also established a strong relationship with national and regional training and research institutions in Asia, Africa, the Middle-East and Latin America and identified nineteen centers of excellence as PPD Partner Institutes. PPD has worked to develop the capacity of these Partner Institutes as well as conduct regional and international South-South training programmes. A capacity development needs assessment was conducted for the Partner Institutes where priority needs were identified and accordingly PPD prepared modules for training in line with ICPD and MDGs.

**Multilevel Analysis of Prenatal Care Utilization:
Importance of Predisposing and Enabling Variables at the Societal and Individual Level**

Aliyar Ahmadi¹ and Mohammad Mirzaei

University of Tehran, Tehran, Iran

e-mail address: ¹yarahmady@ut.ac.ir

Despite improvements in prenatal care services during the last two decades, rural-urban and regional disparities still overshadow prenatal health care utilization in the country. This paper investigates the importance of predisposing and enabling factors that determine rural-urban and regional disparities in prenatal health care utilization. The study, making use of a multilevel approach, is based on the data collected in Iran's Demographic and Health Survey conducted in 2000. The results of the study indicate that both predisposing and enabling variables are significant in determining health care utilization when place of residence is not considered. In terms of rural-urban differentials, it is found that in urban areas predisposing variables including education and knowledge about contraception are important while in rural areas besides predisposing variables, enabling factors of individual and societal access are significant as well. The study indicates that equitable access is realized in urban areas as demographic and social variables account for most of the variance in health care utilization. However, it is not achieved in rural areas of the country as enabling factors play a significant role in explaining prenatal care utilization. Demographic variables of age and parity, social factors of education and knowledge and enabling factor of economic index are significant in uni-level analysis. In addition, in multilevel modeling when the district is considered as the second level of analysis, the role of individual variables diminish as some of the variance in dependent variables is due to variance in districts.

Undocumented Migration - Indirect Estimation Methods

Arindam Gupta¹ and Asis Chattopadhyay

Burdwan University, Burdwan, West Bengal, India

e-mail address: ¹stat_agupta@buruniv.ac.in

Migration is a common feature among people belonging to different countries and at different economic levels. The most important factors responsible for migration are hunger, poverty, security threat, job opportunities etc. But only a part of the total movement is documented through immigration offices. Undocumented migration is an inherent effect of any type of restrictive immigration policy. Several attempts have been made by population scientists to study undocumented migration both in India and abroad. Different approaches based on push and pull theory, network theory, transmigration theory etc have been developed to explain undocumented migration. In the present paper, an indirect method has been proposed to estimate this volume of undocumented migration under the assumption that people who entered a country illegally and ultimately set up their residence in that country will ultimately collect some evidence of national citizenship. As a result, they will be enumerated during the next census. The paper also discusses some imputation based methods.

Structural Motivations for International Labour Migration in Rural Nepal

Yogendra Bahadur Gurung

Central Department of Population Studies, Tribhuvan University, Kathmandu, Nepal

e-mail address: gurungyb@net.ntc.np

Living Standard Surveys show that about 33% of the households in Nepal had out-migrant(s) in 2003-04, of which 51% were international migrants destined mainly to the Middle-East and Malaysia. Work migration from rural areas is overwhelming. In this context, out-migration of able-bodied people from rural areas has been an area of much concern in Nepal, indicating the need to identify factors responsible for migration motivations to address the future of rural agriculture. This paper tries to explore underlying structural factors from both economic and social aspects that motivate rural out-migration for work.

The paper utilizes both quantitative and qualitative information collected in a rural village of eastern Tarai in January-February 2009. A sample of 497 households (20% of the total households) was randomly selected for structured interviews. Qualitative information was collected utilizing in-depth interviews and group discussions. Multilevel analysis of social structures was adopted to examine migration motivations: individual, household and community level structures and broader social structures. Logistic regression was used for quantifiable individual and household level variables. Qualitative information substantiates quantitative analysis and examines the social structures.

The survey found that 41.3% of the households have at least one migrant, of which 64% have international migrants. Able-bodied males aged 20-40 years before marriage are more likely to go abroad. Being of hill origin has 1.84 times higher probability of migration than being of Tarai origin. Households with land have 2.06 times higher probability of having migrants, and means of communication and type of cooking fuel are supportive to migration. Local cooperatives, money lenders and CBOs provide knowledge and loans for migration. The role of relatives/friends, agents and recruiting agencies is closely interrelated to the process of migration.

Landlessness and small landholdings create unemployment and disguised unemployment. Moreover, use of modern agricultural technology on small pieces of land is not cost effective. Consequently, the younger generation feels demotivated due to failure of income from agriculture to cope with modern living and their needs. This has contributed to an increased shift of people from agricultural to non-agricultural sectors. Migration has been a symbol of social status — that they are trusted by villagers, businessmen and moneylenders and are commended by society. Political unrest also fuels migration. People dream of earning money and buying a piece of land in the city to live with peace and prestige.

Migration has made it possible to earn an income for everyday life and thereby social wellbeing. Increased frustration with agriculture is responsible for migration motivation among rural people. The frustration is associated mainly with the absence of government agriculture policy, education and changing consumer culture that are not matched with agriculture; the income gap between agricultural and non-agricultural products, and social and political unrest. Thus, people see migration as the only option for achieving their goal of a dignified social life. However, the lowest strata of people who cannot afford the cost of migration continue to be excluded from its advantage.

Regional Disparity in Level of Urbanisation in Bangladesh

Sadananda Mitra¹ and Tandra Majumder²

¹Independent Consultant, Bangladesh; ²Gandharv Mahavidyalaya, New Delhi, India
e-mail address: ¹mitra2kbd@yahoo.com

The level of urbanization in Bangladesh is still low — 23.81% (adjusted) in 2001. There was sharp growth during the 1974-81 period. Thereafter, although the level is increasing slowly, the annual exponential growth rate has been declining since 1981 to 2001 from 10.63 to 3.3. Though the urban population shows a marked rise during the last two decades, Bangladesh by and large continues to be a predominantly rural country with 76.19% of its population living in villages. Area expansion is the principal reason for population growth in urban areas. The census data shows that the variation in urban population during 1991-2001 was highest in Dhaka division (central part) (46.26%). On the other hand, urban area variation was highest in the southern part of the country – Barisal, with 23.87%. Among other divisions, Sylhet, Rajshahi and Dhaka showed urban area variation of 23.83%, 15.61% and 13.50%, respectively, above the national urban area variation of 11.85%, whereas Chittagong and Khulna Divisions showed variations below the national urban area variation. Among the Divisions, Dhaka and Chittagong are having the urban population variation above the national urban population variation. Whereas Khulna, Rajshahi and Barisal divisions showed population variations below the National urban population variation (40.17%). The push factors like natural disasters, slow economic growth, unemployment are the major cause of rural-urban migration in Bangladesh although weak pull factors. To control unplanned urbanization across the country there needs to address the adaptation program, job creation in the rural areas, vis-a-vis good urban governance.

Internal Migration Pattern and Local Development In Indonesia

Ekawati S Wahyuni

Faculty of Human Ecology, Bogor Agricultural University, Bogor, Indonesia

e-mail address: ekawatiwahyuni@gmail.com

The objectives of this paper are to explain the internal migration patterns among provinces in Indonesia, and secondly, to analyse the relation between them. The development process in Indonesia has created gaps of development progress between provinces. More developed provinces, such as DKI Jakarta, West Java, Riau or Kalimantan Timur, have become centres of economic growth and attract migrants from many less-developed areas in Indonesia. This creates an imbalance of stream and counter-stream inter-provincial population migration. Developments in education, transportation and communication have reduced physical and geographical barriers to population mobility within the country. Indonesians are free to move from one area to another in the country. However, it is necessary to create an internal migration policy to protect the origin and destination areas of migration as well as the migrants and the local people. With the implementation of local autonomy, the regulation and control of internal migration in Indonesia will become the responsibility of the local governments, the provinces and the districts. The decentralization of regulations for population mobility will make it more integrated with local development planning, to create economic growth centres in more dispersed areas in Indonesia, which will become new destination areas of migration. This paper is based on secondary sources, the population censuses and other relevant documents.

Female Migration to Mega Cities of India

Kailash Chandra Das¹ and Arunananda Murmu

International Institute for Population Sciences, Mumbai, India

e-mail address: ¹daskc@yahoo.com

This paper tries to understand the pattern, trend and causes of female migration to six mega cities of India namely Mumbai, Delhi, Kolkata, Chennai, Hyderabad and Bangalore which have more than five million population each. The study uses the census data at two periods of time namely 1991 and 2001. It is found that most of the migrants to these six cities originate from the relatively backward states of India. Marriage is still the most important factor of female migration in India but its importance as a cause of female migration has declined over the period. On the other hand, it is quite encouraging to find that the proportion of females migrating for work, employment and education is increasing over the period between the censuses. The volume of female migration to all the six mega cities has also increased over this period of time.

Rapid Urbanization, Migration and Living Condition Changes in Ho Chi Minh City, Vietnam

Le Van Thanh

Institute for Development Studies, Ho Chi Minh City, Vietnam

e-mail address: thanhlv@yahoo.com

In recent years, rapid and vigorous urbanization has made Ho Chi Minh City (HCMC) the largest urban agglomerate in Vietnam. The establishment of industrial and export-processing zones as well as new residential areas have accelerated its urbanization, economic transformation and development. These developments have been accompanied by an increase in the city's population at an annual growth rate of 3.5% per year, and has been estimated at over 7 million persons¹ of which migrants make up about a third. The concentration of people and industries poses a fundamental challenge to the development of adequate infrastructure and the maintenance of healthy environments. The high population density of the inner city (more than 25,000 persons/km²) poses many environmental problems related to traffic flow, air quality, garbage disposal, water supply, living conditions in slums and so on. As a result, both public authorities and residents of HCMC have to confront the problems associated with a decline in the quality of life in the city.

This paper is an outcome of a research project entitled, "Living conditions under rapid urbanization in Ho Chi Minh City, Vietnam" which aims at providing an image of changes in jobs, income, education, health care, leisure and other aspects of daily life of inhabitants in 12 selected districts (zones) representing different levels of urbanization — high urbanized, medium urbanized and low urbanized. In each district, two sub-districts were chosen on the basis of two criteria namely, fast economic development and strong migratory flow. A total of 720 households were interviewed in addition to in-depth interviews to collect qualitative information.

The project tested three hypotheses, First, that urbanization is a process which increases the gap between the rich and the poor differently in different districts of HCMC due to differences in their socio-economic as well as environmental and demographic characteristics. Second, that employment in the informal sector and slums are the two main factors that are expected to decline due to the introduction of a number of urban policies in recent years. And, third, that the increase in population, especially due to migration, has decreased the quality of life of HCMC residents, even though their income has increased.

The paper consists of three parts: the first part describes the research topic and methodology; the second presents research findings in each site with a summary of the findings at the end; and the third suggests policy recommendations (training for stable jobs, upgrading poor resident sites, among others) towards solving the problems mentioned in the previous parts. Key findings respond to the three hypotheses and provide a lot of evidence of the quality of life in HCMC.

1 According to the census in April 01, 2009, the City population was around 7.2 millions persons

Regional Migration and HIV/AIDS Risk Sexual Behaviour among Male Migrants in Tamil Nadu

T Pugalenti¹ and A Subbiah

Department of Population Studies, Annamalai University, Tamil Nadu, India

e-mail address: ¹pugalevelu@gmail.com

Migrant men are considered a high risk population with regard to sexual behavior and HIV/AIDS, particularly in developing countries like India. Such risk-taking may be reinforced by a lack of HIV/AIDS awareness and social support networks at both source and destination points.

The objectives of this study were (1) to examine the volume and patterns of interstate and inter and intra district male migrants; (2) to analyze the socio-economic and demographic characteristics of migrant males by region; and (3) to illustrate the HIV risk-taking sexual behavior among male migrants by region and influential characteristics. A total of 6730 migrants were selected; of these, 3037 eligible male migrant workers were chosen, including those aged 18 years or older, who had migrated from their homes and had migrated to at least two places during the last two years for work. Data were obtained through face-to-face interviews conducted close to the residence or workplace of respondents. To analyze the data and find out regional patterns of migration the districts were grouped into two groups according to the place of destination: Thiruvallur, Chennai, and Kancheepuraam were considered as Region (1), and Coimbatore, Pudukkottai and Tiruchirapalli as Region (2). Appropriate statistical tools were used to find the association between variables.

Findings showed that extra-marital sex among migrant men was associated with age, income, and drinking alcohol prior to sex. Consistent condom use among male migrants was low, increasing their vulnerability to HIV. However, Region (2) which is far from Chennai, showed inconsistent condom use, perhaps due to poor awareness and availability of condoms within the communities inhabited by the male migrants. Government and NGOs should impart information about the importance of condom use and make use of the availability among young male migrants. Counseling is also necessary to help the migrants to avoid drinking alcohol prior to sex so that they understand the seriousness of HIV vulnerability.

**Population Growth and Land Use Change in Jaipur, Rajasthan:
A Temporal Analysis Using Remote Sensing and GIS Techniques**

Rupesh Gupta

Delhi School of Economics, Department of Geography, University of Delhi, Delhi, India
e-mail address: gisrs@oneindia.in

Jaipur city is situated in the North-West zone of India. Its population has grown from 0.3 million in 1951 to 2.3 million in 2001, and 2.9 million in 2009. The annual average growth rate from 1971 to 2001 has been in the range of 4.1 to 4.7. The growth rate was the highest in the year 1981 but declined sharply by 0.6 per cent in 1991 and grew again by 0.2 per cent in 2001. The impact of such growth is seen in the change in land use; it has created many environmental problems in the city, and led to the congestion of the walled city. Based on the use of multi resolution and multi temporal satellite data of 1975 to 2009, spatial and temporal changes in the various types of land use in the city are detected and discussed in the paper.

**Male Out-migration and Left-behind Wives:
A Study of Conjugal Separation in Rural Varanasi, Uttar Pradesh, India**

Sujata Ganguly and Sayeed Unisa

International Institute for Population Sciences (IIPS), Mumbai, India

e-mail address: sujataganguly2002@rediffmail.com

Migration has an impact on the lives of those involved and on their families and community members, involving factors such as the flow of remittances and income to the family and increased access to information, goods and services. People migrate to other places in search of employment or to enhance their economic position. This sometimes entails leaving behind their families due to problems of acquiring adequate accommodation for their families or other intervening obstacles. It cannot be disputed that the absence of the migrant from the household, especially if he is a family head, can have serious implications for leftbehind women, especially wives, both socially and economically. On one hand it is believed that women get more authority and decision making power whereas on the other hand, it is accepted that male migration does not substantially change women's decision making power in the place of origin. Hence, not enough is known, both theoretically and empirically, as to whether or not those left behind are particularly vulnerable and how, when, and under what circumstances they benefit and/or suffer due to migration of their household members.

This paper seeks to study the pattern of male out-migration and its impact on left-behind wives with an emphasis on their living arrangements and extent of mental stress.

Primary data were collected from six villages of Pindra block of Varanasi district in Uttar Pradesh. The sex ratio (females above six years of age per thousand males) and growth rate (male) (1991-2001) were used as proxy indicators of migration to select villages. A census of the six villages was carried out to identify households with left-behind wives due to male out-migration. Hence, out of a total of 1480 households, 270 households were selected for the survey.

Findings indicate that about 60% of out-migration was towards Mumbai (power loom industry) followed by Surat. Among them a considerable number had migrated for more than 10 years. Most of the out-migrants visited their home once or twice a year. Further, around 38% of left-behind women in all the villages were less than 30 years of age and around 55% were between 30-45 years of age. These women mostly lived with their in-laws. However, a good number of the women lived in nuclear households as well. These left-behind women have been caught in a trajectory whereby while out-migration of their husbands is mandatory for their sustenance and a better living, it also deprives them of every expectation pertaining to married life.

To conclude, left-behind women perceive out-migration of their husbands as "*not good*" as conjugal separation is quite traumatic, but are ready to send their sons whose remittances would add to the family income.

**Marital Stress among Left-behind Wives of Out-migrated Men in India:
A Critical Appraisal of Demographic Literature**

Sujata Ganguly

International Institute for Population Sciences, Mumbai, India

e-mail address: sujataganguly2002@rediffmail.com

Most aspects of human behaviour, including migratory behaviour, are both a response to feelings and an exercise of independent will (Stark and Bloom, 1985). Not enough is known, both theoretically and empirically, as to whether or not the left-behind are particularly vulnerable and how, when, and under what circumstances they benefit and/or suffer from migration of their household members (Nguyen et al., 2006). A number of sociological studies have noted the prevalence of conjugal separation but studies which identify the important empirical determinants of conjugal separation are rare. There is clearly a need for such studies, as separation from spouse is perhaps the most important element in the psychological costs of migration (Banerjee, 1984). The prolonged duration of the migrant's absence from the place of origin, however, reduces familial interdependency. It decreases the extent of relationship with family members, friends and relatives (Sinha and Ataullah, 1987). The sheer duration of absence can strain marital relations. If a wife lives with her in-laws while her husband is gone, additional stress is associated with living arrangement and it can raise the probability of divorce as is often the case among young brides left behind in Kerala in India (cited in Shah and Arnold, 1985). If the bonds between spouses were not well-established prior to the husband's departure, as often happens when his return visits are infrequent and if the wedding takes place on one such visit, the chance that the latter problems will ensue are heightened (Findley and Williams, 1991). Surrounded as she is often by the in-laws only, sometimes hostile, any protection she may have had from her husband is no longer available to her (Hauser, 1957). Such problems seem to be serious in the case of newly married brides. Mental illness has been found to be particularly acute in the so-called "Gulf Pockets" of Kerala state (Gulati, 1983; Nair, 1983). Women in the age group of 15 to 25 seem to be the worst victims. A major cause of psychiatric disorders is the incompatibility of these young women with their in-laws, made worse by their husband's absence (Parasuraman, 1986; Nair, 1983). The influx of migrant remittances has ruptured traditional patterns of co-operation between households and left-behind women, as they are often more on their own than they were before. The level of variability in the situation of left-behind women can be further established by the fact that some retain close marital bonds and receive regular financial support from their husbands, while others fit the image of women deserted and struggling to varying degrees as a result of their abandonment. Many left-behind women experience heightened psychological stress due to their husband's absence. Some women fear that their husbands may never return. Such fears, in combination with the additional responsibilities shouldered by women in the absence of their husbands, can contribute to psychological disorders among left-behind women (Findley and Williams, 1991). This can also lead to overall deterioration of their health.

Migration and work force participation in Mumbai

Chandrashekhar¹ and R B Bhagat²

International Institute for Population Sciences, Mumbai, India

e-mail address: ¹shekhar_tanman@yahoo.com

Migration is a process of development. Majority of the literature focuses on causes and consequences of migration. Some important studies have concentrated on migration in Mumbai using census data prior to 2001. Although a number of other studies using census data have concentrated on the processes of migration and its consequences, little attention has been paid on the workforce participation of migrants in Mumbai, especially using the 2001 census data. This is one of the important aspects of migration because migrants form an important part of the total workforce. Consequently, it is imperative to understand migrant workers as a workforce.

This study aims to look at the distribution of migrant workers in different industrial categories and, at the same time, it tries to find out gender differences among migrant workers in different industrial categories. The source of data is the Census of India for the years 1981, 1991 and 2001. The census collects migration data on the basis of place of birth and the place of last residence. Both kinds of data have been used here. For this, migration data is taken from D series of migration tables and from D series, from which only D-1, D-2, D-8, D-9, and D-10 tables are used. D-1 table gives data on the basis of place of birth; D-2, D-8, D-9, and D-10 tables give data on the basis of place of last residence.

Findings show that migration has played a very important role in changing the demographic characteristics of the city. The total migrant population was 5.2 million in 2001, of which 2.5 million (48%) are workers. Out of the total migrant workers, male and female migrant workers constitute 88% and 12%, respectively. The largest percentage of male migrants is employed in manufacturing industries, constituting 28.21% of the total migrants. It becomes clear from these findings that more than 40% of the migrants are in the prime productive age group, that is, in the age group 15-35. This may be a reflection of the liberalization of the Indian economy after 1991. Little less than half of the migrants in Mumbai are from within the states and the remaining are from outside the state. There is more male participation in the workforce. This is more than 50% in case of males and is evident from the sex-ratio of the migrant workers. The situation is almost the same in case of migrants as well as non-migrants. In almost all the industrial categories, the percentage of non-migrants is greater than that of migrants. Also, the proportion of male non-migrants is greater in all industrial categories. In almost all industrial categories, the sex-ratio of migrants is highly skewed in favour of males that is, even if there is feminization of the process of migration in other parts of the world, such a phenomenon does not seem to be happening in India.

Spatial Patterns of Intra-urban Residential Mobilities in Lahore-Pakistan

Safdar Ali Shirazi

Department of Geography, University of the Punjab, Lahore, Pakistan

e-mail address: shirazi@geog.pu.edu.pk

Lahore is a metropolitan city, also the capital of Punjab and the second largest city after Karachi in Pakistan. It lies between 31°-15' and 31°-43' north latitudes and 74°-01' and 74°-39' east longitudes. The city is 213 meters (702.9 feet) above mean sea level in the northeast and slopes to 783 feet in the southwest. Lahore has an area of 1,772 sq km. The total population of the city as reported in the 1998 census was 5,143,495 persons. The total area of the city districts is 1,772 sq km which gives a population density of 3,566 persons per sq km as against 2000 persons observed in 1981, indicating a fast growth rate of the district. According to an estimate, the present population of Lahore is 9,225,867 persons. The city has witnessed momentous urban development during the last two decades. In addition to rural urban migration, residential mobility is also one the potent factors for its areal expansion. Intra-urban residential mobility is when people change their usual/native residences and move to some other locality within the same city under the influence of a set of factors. Residential mobility is a critical aspect of urban land use dynamics. Research on urban areas needs to consider the residential mobility behavior of households to be able to forecast future socio-economic and demographic patterns which are critical to all sort of activities in a city. Unfortunately, very little is known about residential mobility and behavior in Lahore-Pakistan. It is the assumption of this research that intra-urban residential mobilities are on the increase in Lahore, with people moving from one Union Council (UC) to another within the territorial jurisdiction of City District Government Lahore. In this paper, we have focused on some important aspects of residential mobilities in Lahore. This paper studies the factors which influence choice of location of mover households between neighborhoods (UCs) in the city of Lahore. The present work is based on a socio-economic household survey of 1125 households in nine selected UCs, one each from nine Towns of the city. Age, sex, income, location of previous and present residence, marital status, size of family and various factors which forced people to move from one place to the other, and intention to move again from their present residence were also considered. Similarly, people were also probed in which direction /housing schemes they wish to move if they decide to move again from their present place of residence. The socio-economic characteristics of respondents in all the sample study Union Councils were closely examined, after which the logistic regression technique was used to evaluate the relationship that exists between socio-economic variables and intra-urban residential mobilities. The results of the regression analysis confirm a strong relationship between resident's socio-economic characteristics and intra-urban mobility in the Lahore metropolis. The results of the paper have been presented in GIS environment and recommendations have been put forth to streamline this phenomenon in the present context.

Cognitive Test Performance of Elderly People Based on Hindi Mini-Mental State Examination in Rural Northern India

Pawan Kumar¹ and Alok Kumar

Department of Community Medicine

Institute of Medical Sciences, Banaras Hindu University, Varanasi, India

e-mail address: ¹ pawannwd@gmail.com

Dementia and other mental disorders of older people remain hidden problems rarely brought to the attention of healthcare professionals and policy makers. Since resources do not exist to provide skilled clinical evaluation for dementia to all elderly individuals, some kind of screening process is required to set apart those who appear to require such an evaluation. The primary function of a screening instrument is to identify individuals with the highest probability of having the disorder of interest (that is, dementia). This paper uses the Hindi Mini-Mental State Examination (HMMSE), which is a modified version of Mini-mental State Examination (MMSE) to screen elderly individuals for cognitive impairment and tries to find out the items of HMMSE which respondents find greater difficulty to respond to. The study is based on a sample of 594 aged people (60+ age group) collected from the northern rural areas of Uttar Pradesh, the most populous state of India, in 2009. The sample was drawn by applying a multistage random sampling technique. The scores of HMMSE were analyzed statistically according to different socio-economic and demographic variables of the elderly.

Results showed that the elderly from this Hindi speaking state had little or no education and were largely illiterate. Overall, about 3% of the elderly scored 23 or lower with a mean score of about 27. The study shows a highly significant difference in HMMSE scores according to age and educational level of the elderly ($p < 0.001$). In the rural areas under study, the majority of elderly people with no schooling were not able to obtain perfect scores on items such as 'copy drawing' and 'time orientation'. Low scores in HMMSE were also found to be related to gender and marital status of elderly people.

Socio-economic Determinants of Health Inequalities among the Older Population in India: A Decomposition Analysis

Lucky Singh¹, Srinivas Goli² and P Arokiasamy³

International Institute for Population Sciences, Mumbai, India

e-mail address: ¹lucky_5bhu@yahoo.com

The proportion of the older population (60 plus) has increased from 6% in 1950 to 8% in 2001, and is further expected to increase to 20% by 2050. Ageing is not a crisis in India as yet, but we need to reckon such a situation fifty years from now, given that the size of the older population currently is more than the population of mid-sized countries of Europe. Secondly, the older population in India is growing at an annual rate of more than 3%. The shift in the age structure towards the older population has important social and health consequences. There is an increase in the number of aged persons who spend a large proportion of their added years in poor health and prolonged illness. The issue of socio-economic status of the aged population is by far the most overwhelmingly significant risk factor for health and wellbeing. Disparities in socio-economic conditions create large health inequalities among the elderly which have been given little attention to date. This present paper has developed a socio-economic framework relevant to the cultural context of India to facilitate a better understanding of the linkages between the socio-economic status and health condition of the elderly population. The paper used data from the 60th round of the National Sample Survey Organization, 2004, the recent World Health Survey in India, Health Information of India; 2005 National Family Health Survey (NFHS-3), and the Census of India, 1991 and 2001.

Analysis indicates that the epidemiological transition occurring along the socio-economic stratum results in two different patterns of diseases existing side by side — chronic and degenerative disease among the more affluent sections, and communicable diseases among the poorer sections. Declining family size and breaking down of the extended family system over the years are resulting in fewer aged persons living with their sons and daughters. In this context, the results show that poor socio-economic groups are hardest hit by the disease burden in old age. Gender disparity in health among the elderly by socio-economic status is significant since remarriages of widows is uncommon in India. At the same time, there is an alarming increase of divorce in selected communities. This accounts for more widows than widowers and single women with the greater burden of diseases associated with ageing. Results of multivariate analysis show noticeable effects of religion, caste and gender on the disease burden among the older population. Decomposition analysis reveals that 65% of inequality is explained by four socio-economic variables (caste, religion, wealth and gender). The evidence clearly shows the significant consequences of socio-economic disparity on health inequalities among the aged population in India.

Time Transfers between Children and Elderly Parents in Urban Pune, India

Manasi Bawdekar¹ and Laishram Ladusingh²

¹Institute for Population and Social Research, Mahidol University, Thailand;

²International Institute for Population Sciences (IIPS), Mumbai, India

e-mail address: ¹manasi_rahul@rediffmail.com

Families depend on each other for many types of support and help. The concept of 'intergenerational transfer' particularly in terms of 'time' is employed in this study to describe the ongoing reciprocal relationship between parents and their adult children. Although intergenerational time transfers are not as substantial as monetary transfers in practice, little is known about their role and importance, particularly to and from elderly parents in India. This paper attempts to study empirically the nature and pattern of time transfers between coresiding and non-coresiding parents and their adult children in Pune, a highly urbanized city in the state of Maharashtra, using micro-level primary data based on 537 men in the age group 25-59. Data clearly reveals that time transfers to and from the elderly parents are universal irrespective of highly urbanized set up and co-residency status. However, sons were found to provide more time to those parents who they perceived to be a strong source of support. Two-stage least square regression highlighted factors like age, presence of sibling in the household, headship status, and monetary support received from and made to the parents, to be significantly associated with the time given to parents. No evidence of substitution between time and money between the two generations was found. In case of non-coresidency, time support is more frequent and intense when the parents stay in the same city whereas monetary transfers dominate in case of parents residing in an altogether different city or village.

Grandparents' Latent Problems in Tehran: A Socio-demographic Appraisal of Ageing in Iran

Mohammad Taghi Sheykhi

Al-Zahra University, Tehran, Iran

e-mail address: mtshykhi@yahoo.com

Grandparents are some forgotten people in many societies. To reflect a transparent perspective from them would help gerontologists, demographers, sociologists, and many other experts to judge and plan for them as per their needs. This paper explores the quality of life and problems faced by an increasing number of ageing grandparents in Iran. These people, under the rapidly changing circumstances, have increasing problems with their health, income, medical treatment, old-age care, housing etc. in which many issues remain hidden. Grandparents need to be more touched and heeded under conditions in which the family system is rapidly breaking down and as a result, a generation gap is appearing. The paper examines how increase in longevity and number of grandparents are paralleled.

For this research, the author approached a number of sample families with grandparents. Some 452 designed questionnaires were administered among families with grandparents. In this way, their lifestyle was thoroughly investigated. Similarly, relevant theories and literature were consulted to complete the research. Results revealed the different characteristics of 272 surviving grandmothers, that is, a sex ratio of 68 males for every 100 females. The research further indicated that the ageing grandparents are in great need of being dealt with from different dimensions. The paper evaluates how social and economic conditions among grandparents are different from each other. However, findings show that ageing grandparents have become very much vulnerable in recent decades. To conclude, as observed, personal characteristics of grandparents such as health status, personality traits, socio-economic background etc. contribute greatly to the quality of life of these people. An almost doubling of grandparents during the fifty years from 1956-2006 reflects their increasing needs including social services and the like, failure to provide which will result in the deterioration of their quality of life.

Intergenerational Visits among Elderly in a South Indian City

Dr. N. Audinarayana

Department of Sociology and Population Studies, School of Social Sciences,
Bharathiar University, Coimbatore, India
e-mail address: audinarayana.bu@gmail.com

In the modern, technological age, maintaining inter-generational relationships during old age has become a tough task, especially in the urban settings of less developed countries. This is because, on the one hand, the majority of children, after marriage, tend to live separately and, on the other, elderly persons (60+ years) try to live alone / by themselves so as to live peacefully without interfering in the matters of their children. However, both children and elderly persons try to keep up family connections; especially elderly parents with sons, by visiting each of them whenever they feel like it. Against this background, this paper makes an attempt to examine inter-generational relationships in terms of visits to each other — by elderly parents to their children and vice versa — and the factors affecting such visits. Data for this purpose were collected (during 2009), with a semi-structured interview schedule, from 778 elderly persons (60+ years) from four wards in Coimbatore city, Tamilnadu. In the present context, data pertaining to those elderly whose son(s) are not co-residing with them (589), only used. 'Any visit by elderly persons to their son(s)' and 'any visit by son(s) to their elderly parents' as dependent variables and a host of background characteristics of the elderly were considered as independent variables. The logistic regression technique was adopted for analysis.

Findings indicate that on the whole, about 37% of the elderly reported that they used to visit their son(s), whereas 41% stated that their son(s) used to visit them. Results of logistic regression analysis showed that distance is not a deterrent factor for visiting either for elderly parents or their son(s). For instance, the likelihood of any visit by elderly parents to their son(s) as well as by son(s) to their elderly parents increased significantly with an increase in the number of children living within the city, outside the city, and outside the state ($p < 0.001$ in each case). Educational status of the elderly tends to influence both types of intergenerational visits in a positive direction to some extent. On the other hand, such visits were significantly fewer ($p < 0.001$ in each case) when elderly parents currently headed their respective households. Likewise, elderly parents suffering from two or more physical disabilities were significantly less likely to visit their son(s) and their son(s) to visit them. Conversely, elderly parents who ever reported to be 'ill healthy' tended to visit their son(s) to a certain extent as was the case with visits by their son(s). Another interesting fact noticed here is that both types of intergenerational visits under consideration were significantly fewer when the number of earning members was higher in homes where elderly persons resided. Interestingly, the odds of elderly parents ever visiting their son(s) were 2.1 times and 1.6 times higher when they belonged to forward castes (better in social standing) and backward castes (fair in social standing) as compared to their counterparts from scheduled castes / tribes (lowest in social standing); however, such a pattern did not exist in the case of visits by son(s).

Exploration of Post-retirement Economic Activity in India, 1971-2001

Preeti¹ and Laishram Ladusingh

International Institute for Population Sciences (IIPS), Mumbai, India

e-mail address: ¹pdhillon_maths@yahoo.co.in

There is a common notion that increased longevity leads to more years of economically productive life. This is based on the assumption that health conditions either improve or, at least, do not worsen in post-retirement age and economic opportunities will be available for all. In many countries across the globe, with the fall in mortality and lengthening of life expectancy, numerous questions about the quality of the years lived and work participation in post-retirement ages of 60 plus have been raised. The foregoing question is relevant in the Indian context as well, and hence it is important to know whether Indians enjoy longer economically active lives or whether an increasing fraction of life past 60s is spent as economically dependent. Weakening of traditional support systems, lack of personal savings and limited coverage of pension or lack of public support to aged persons in developing countries, including India, might be responsible for higher work participation past 60s as compared to that in developed countries. On the other hand, availability of some work in agricultural and allied sectors as well as in various activities in the un-organized sector in less developed countries provides them with some opportunities to work. With this background, this paper aims to analyze the trends of post-retirement economic activities in comparison to the prime working age group by sectors and trends in working life expectancies (WLE). Further, we also estimate the overall magnitude of inequality in the length of working life by sex. Statewise WLE are also calculated to see the regional pattern. In all the sectors, work participation rates at post retirement age of 60+ years in comparison to that of prime working age group 30-59 years has shown declining trend over the period 1971-2001.

Findings indicated that the work pattern is shifting from the primary to the tertiary sector among the elderly. Though life expectancy at 60plus for males has gained by 2.9 years during 1971-2001, their WLE has increased marginally by 0.1 year, during the same period. On the other hand, among females, with 4.2 years improvement in longevity at age 60-plus, there is a gain of 2.4 years in working life. Regional pattern shows that disparity between working life expectancy and life expectancy at age 60plus is higher for both males and females in the demographically advanced states of India such as Kerala, Punjab, Haryana and Gujarat,. Results of the index-of-dissimilarity in length of working life (IDLWL) shows that 3.0 years of working life after 60 should be redistributed for gender equality in 2001.

**How the Elderly Live in Punjab: A Field Survey of the
Living Conditions and Health Status of the Elderly of Punjab**

Fauzia Maqsood

Center for Population, Urban and Environment Studies

University of Gujrat, Pakistan

e-mail address: fauziamaqsood@gmail.com

The present study aimed to examine the perceptions and self reported attitude of elderly towards their living conditions and health status. Major objective of the study were to assess the physical health, activities of daily living and financial conditions of the elderly based on sex, marital status, living arrangements, dependency relationships and activities of daily living (ADLs). Data was collected from the largest province of Pakistan- Punjab and a sample of 4,191 (elderly men and women of 60 years and older) was drawn by using probability proportionate to size sampling technique. The findings of the study provided statistical analysis of living arrangements of elderly, their access to various facilities, their demographic and socioeconomic status, their physical and mental health status, their activities of daily living and their participation in social activities. Findings suggest that majority of the respondents were illiterate women who had never been employed; more women were widow compared to men; more women suffered from chronic diseases and joints pain (this finding is contrary to common understanding in Pakistan) compared to men, more women faced difficulties in walking around the house and going out.

More female respondents reported difficulty in performing each of the seven ADLs than their male counterparts: for taking a bath, 16 percent against 10 percent; for changing clothes, 9 percent against 5 percent; for eating meal, 39 percent against 29 percent; for walking around house, 31 percent against 21 percent; for going outside house, 48 percent against 37 percent; and for using toilet, 24 percent against 18 percent.

A major issue for the elderly is social isolation and loneliness. The data further revealed that grown up children with families often go out to meet friends or for entertainment, leaving the parents alone at home. At times, the elderly find themselves too old and ailing to participate in social gatherings on regular basis.

Finding out the Relationship of Girls' Education and Empowerment across Ethnicities of Pakistan

Iram Kamran¹ and Batoool Zaidi

Population Council, Islamabad, Pakistan

e-mail address: ¹ ikamran@popcouncil.org

Empowerment is an opportunity to translate one's desires into reality. Or is it a control over one's own life? Since Pakistan is a male governed society, women have to work hard to be empowered. Presumably, education can be a gateway towards empowerment as it is one of the major social factors that influences exposure and creates opportunities to change the social and economic status of a woman. According to Pakistan Demographic and Health Survey (PDHS), 2006-2007, 67% of the population resides in rural areas where education facilities are limited in general and for girls in particular. As a result, 61% of rural females have no education compared with 33% females in urban areas. Apparently, it is assumed that lack of education of rural women makes them more submissive than urban women,; if this is so, educated rural girls may be more empowered than uneducated ones. Thus, this paper aims to explore if there is any role of schooling in empowering young rural girls of Pakistan with reference of different ethnicities.

The objectives of the study are to: (1) find out if education plays any role in empowering young girls; (2) understand the perspectives of educated and uneducated girls and mothers of young girls on girls' schooling and empowerment; and (3) gauge ethnicity based similarities and differences regarding girls' empowerment, decision making and mobility issues. The study is based on qualitative research; a total of 36 focus group discussions (FGDs) were conducted among at least six different types of main ethnicities of Pakistan. Each FGD had 7 respondents on average; about 250 respondents participated in the study. At least one rural community was visited to cover each ethnicity and as criteria community had to have a middle level school for girls. The participants were educated and uneducated girls of 17-22 years and mothers having girls above 13 years of age. The criterion of an educated girl was at least primary education and above; the uneducated were those who had never been to school or dropped out before completing primary school. 'Mothers' was a mixed group having educated and uneducated daughters. Moreover, community profiles and men's perspectives on girls' empowerment were also gathered through informal group discussions. Following the objectives of the study, the information collected has been analyzed to look into the relationship between girls' schooling and their roles in decision making. The level of involvement in decision making can determine the level of empowerment. We focus on their roles in decision making at the community and household level and whether education contributes to self worth/confidence. Perceptions and experiences of educated and uneducated girls are expected to give us insights to understand the empowerment phenomenon. Mothers' and men's perspectives should be supportive sources to find out the route of empowerment. The ethnicity angle is also expected to uncover the meaning of empowerment for them and the possible effect of schooling on it. These findings have also been compared with two national level surveys on adolescents' and women's status carried out in 2002 and 2003, respectively.

Experience of Violence among Adolescent Boys in Slums of an Indian Metro City: Perspectives from their Life Courses

Jaydeep Sengupta

Child In Need Institute (CINI), Daulatpur, West Bengal, India

e-mail address: senjaydeep@gmail.com

Despite worldwide concern for the development of youth and adolescents, in particular, in reality it is difficult to construct youth as a homogenous social group. Their lives are rooted and shaped differently by the complexities of the social, cultural, political and economic forces of the community in which they live. There is a marked variability in the lives of youth across communities and larger societies. Thus, despite expanding educational and economic opportunities for youth, many-a-times youth in Asia, particularly in some communities of India, can hardly avail the benefits. In contrast to the wider proclamation of the nation reckoning youth as an asset to the community, their lives are marked with experiences of violence and abuse in different situations within their family and beyond. In India, violence among adolescents is understudied. It has largely been restricted to depict boys only as perpetrators of violence and girls as victims. There is an overall negligence toward the swelling evidence in modern times that boys are also victims. This forms the basis of focusing on young boys as victims of violence in the present study to distinguish it from other studies. Moreover, perpetration of violence is subjective to the social context. Its intensity and capacity to survive it largely depends on the web of factors that define the social context of the young boy.

This study is centered on the lives of a few young boys coming from families with a low socio-economic condition in an Indian metro city. The study basically seeks to identify factors that shape violence in the everyday lives of these adolescent boys; to examine how these factors combine to shape violence and implicate on the lives of the boys, and to link the findings in the larger context of policy discussions.

Experiences of violence were captured through narratives of boys regarding their life trajectories. In order to study the social process by which violence shapes in the lives of the boys, the focus was more with reference to their everyday life. The information was cross-checked from other available sources. Analysis of their life courses revealed information as to how violence perpetrated and influenced their life. The study is based on twenty-six young boys from two slums under the Municipal Corporation of Kolkata city in eastern India. Though the sample size is not quantitatively viable, the attempt unravels deep insights of violence in the life courses of boys living in urban settlements with low socio-economic opportunity.

The narratives of the boys revealed that they experienced violence ranging from parental negligence to exploitation at the workplace, sexual harassment by peers, police torture and humiliation by neighbours. In most of the cases, violence initiated within the family later had influence from the community. Every incident of violence affected their communal and familial relationship besides affecting their health. The study raises a strong male voice against perpetration of violence and the role of the state in mitigating the predicament of such adolescents. The findings, therefore, will influence the gender dialogue and policies at a larger level.

Perceptions and Knowledge of Schooling Girls and their Mothers on Puberty and its Management during Menstruation

V K Ravindra Kumar¹ and P Vinayaga Murthy

Sri Venkateswara University, Tirupati, India

e-mail address: ¹ravindrakumar.vk@gmail.com

In many Asian countries, research on reproductive and child health (RCH) is confined to studies on sexual behaviour and prevention of RTI/HIV and not on the multifaceted aspects of reproductive health. Globally, due to increased health and nutritional levels, the mean age at menarche is gradually declining and, in some cases, it has been occurring at the age of 8 or 9 years. Puberty and adolescence have become challenging issues for young schooling girls. As the average age of menarche is dropping and the average age of marriage is rising, it is alarming that only little attention is being given to the social, psychological and educational aspects of post-pubescent girls and their unmet needs. Most of the young girls are not confident and independent to cope with problems related to menstruation. Further, insufficient facilities in many schools, including short uniforms, are creating an unfriendly environment for menstruating girls. The present study focuses on an assessment of the perceptions and levels of knowledge of puberty among schooling girls and their mothers, and the management of menstruation at home and in school. The study was carried out in Chittoor district of Andhra Pradesh, India. A total of 300 mothers (aged below 45) with at least one girl child was drawn from the listed out villages for the study. Further, the daughters of these respondents, aged less than 12 years, who had attained puberty and were attending school, were listed out separately. These girls were interviewed to understand their experiences, knowledge and skills of management during menstruation. Five trained female investigators were used to carry out the interviews of both mothers and girls, using two interview schedules designed separately for the purpose. Results indicated that the age at onset of puberty in the majority of girls was 11 years or less.. The girls had never received information nor had they been trained at home to cope with the problems related to menstruation. The school curriculum and teaching methods had not helped the girls to develop the skills of menstrual management. No special weekly classes were organized exclusively on RCH issues separately for boys and girls in most of the schools. Assistance from a medical nurse and privacy for menstruating girls were available only in a few selected schools. Much more research is necessary to change school curricula and to provide additional facilities in schools to create a friendly atmosphere for post-pubescent girls.

Eating and Weight Concerns among Sikkimese Adolescent Girls and its Bio-cultural Correlates

Shailendra Kumar Mishra¹ and Susmita Mukhopadhyay²

Department of Anthropology, Guru Ghasidas Vishwavidyalaya, Bilaspur, India

e-mail address: ¹shailendra17@gmail.com

Adolescent girls in many societies are extremely conscious about perfect body size. With the growing sense of ideal body image during adolescence, they try to loose or gain body weight to attain perfect body proportions. Various prospective and cross-sectional studies have identified that factors such as age, female sex, frequent dieting, preoccupation with thinness, being teased for body shape, their own dissatisfaction over body weight, perceived peer and media pressure to be thin, and family history of eating disorders are important in determining eating behaviours and weight concerns among adolescents. Moreover, modernized societies tend to value thinness and socially discriminate against overweight individuals.

The present study investigates the dietary patterns and their association with the socio-demographic characteristics of a group of adolescent girls in Sikkim, a small state in north-eastern India. As a consequence of rapid development, the influence of Western culture, especially among the adolescents is being felt in recent years in Sikkim. This study further examines the relationship between dietary patterns and the risks of obesity. Finally, the study evaluates the level of dissatisfaction related to body weight among the girls and their urge for dieting, and its associated factors.

The study population includes 577 girls, aged 15 to 19 years, from all three population sub-groups of the state that is, Nepalese (caste group), Bhutia and Lepcha (tribes) in both rural and urban areas. These groups are, however, ethnically different from each other but they have shared an almost similar physical and social environment for many generations. A two-stage sampling design was used for selecting the study participants. Data were collected using interviewer-administered questionnaires in the household of each participant. Data were collected on socio-demographic characteristics, food habits, dietary behaviours, media exposure, and anthropometric measurements. Bivariate and multivariate statistical analyses were used.

Findings identified three main food groups through principal component analysis that is, vegetable-fruit-milk-cereals, meat-fish-egg, and snacks-ice cream-beverages. Positive associations were noticed between high score for snacks-ice cream-beverages and factors like urban living, school enrolment and higher economic status. Interestingly, a majority (84%) of participants who expressed their dissatisfaction over body weight or urged for dieting (81%) show normal body mass index. Place of residence, exposure to television and monthly family expenditure showed significant associations with their expressed feeling of dissatisfaction with their body weight. Participants who were dissatisfied with their body weight were about five times more likely to report dieting. The study suggests a widespread sense of dissatisfaction over body weight among both normal and overweight girls which may lead to unnecessary food restraints and other unhealthy weight control practices among them. Findings of the study demonstrate that the changes in lifestyle, as a consequence of modernization and exposure to media, are resulting in the development of dissatisfaction with body weight and unhealthy eating habits. Calling attention to the interrelation between the problem of weight concern and dietary behaviours among adolescents, the study suggests educating adolescents about what constitute healthy weight, healthy growth, and physical maturation to help them rightly balance caloric intake and physical activity.

Adolescents' Knowledge on Reproductive Health Related Issues in Urban-Rural Areas of Bangladesh: Survey Results

Md. Mokbul Hossain

IRDC, Dhaka, Bangladesh

e-mail address: ircngo@gmail.com

Bangladesh has a total population of 147 million. This includes 32.6 million adolescents. Among them, 7.8 million girls fall in the age group of 10-14 years, and 7.2 million girls in the 15-19 year age group. Adolescents appear to be extremely ill informed about their own sexuality and physical well-being. Analysis of available data suggests that adolescents in Bangladesh are exposed to the same reproductive health risks as adolescents in other developing countries. A survey of 2490 adolescent boys and girls from semi-urban and rural areas of Bangladesh reveals that perceptions of personal hygiene are more clearly understood by respondents of urban areas than their rural counterparts – 45.5% of the boys and 44.0% of the girls in rural areas understood it compared to 75.2% boys and 71.2% girls in urban areas. The consequences of not maintaining personal hygiene were also more clearly pronounced by boys (71.0%) and girls (71.5%) in urban areas than their rural counterparts; boys (47.8%) and girls (55.0%). Perceptions regarding menstruation did not vary greatly among adolescent girls in urban (61.4 %) and rural (62.1%) areas. Sources of information about menstruation were mentioned as relative/friends/peer by 73.6% of rural girls and 69.6% of urban girls. Mother, as a source of information was mentioned by 29.7% urban and 17.8% rural girls. In this study, only 11% rural girls and 0.2% urban girls were found to be ever married. Among the married, 55.6% rural girls and 27.3% urban girls were found to be pregnant. Among them, more than 80% of urban and rural adolescents who had given birth had delivered at home. Regarding knowledge of family planning, it was observed that 28.4% of rural boys and 43.2% of rural girls had ever heard of family planning; in contrast, 46.7% urban boys and 51.1% urban girls had this knowledge.

Sexual Health among Young Adults in Pakistan: Knowledge, Attitudes and Practices

Mehtab Karim¹, Fozia Ajmal² and Aysha Shiraz³

¹ Pew Research Center Washington DC, and School of Public Policy, George Mason University, Arlington, USA; ² Aga Khan University, Karachi, Pakistan;

³ National Institute of Population Studies, Islamabad, Pakistan
e-mail address: ¹mehtabkarim@gmail.com

Pakistan is among the countries where due to constant high fertility in the past, about 25% of the population belongs to the category of youth between ages 15-24. In a conservative Islamic society, even discussion of sexual health with young adults is often considered taboo. Thus, there is a dearth of information about knowledge, attitudes and practices of young adults in Pakistan, which is a hindrance in framing appropriate policies for them, resulting in the inability of youth to exercise the basic right of making reproductive choices.

This study derives data from a cross-sectional national survey conducted in a representative sample of youth in Pakistan in 2003 by the National Institute of Population Studies. However, since the survey did not have enough sample of college-attending young adults particularly females, a follow up survey was conducted by the principal author in 2004 in a representative survey of students enrolled in colleges and universities in Karachi, Pakistan's largest city, to elicit information on socio-demographic characteristics and knowledge, attitudes and practices (KAP) regarding contraception and other important sexual issues confronting them. In the national survey, 4311 young adults (1822 males and 2489 females) were successfully interviewed. Whereas, in the Karachi survey, 957 students (542 males and 415 females) were interviewed. The national sample was analyzed separately for rural and urban areas and the results compared with the sample of students enrolled in colleges/universities in Karachi. Since the minimum age in the Karachi survey was 18 years, for the analysis of the national survey, we excluded respondents below age 18. Results are presented with the help bivarite and logistics regression analysis.

Results of both the surveys indicated that the mean age of respondents was about the same (20.7 years, SD 2.1 in the former and 21.0 years, respectively SD 1.8 in the latter). However, while all those interviewed in Karachi were enrolled in educational institutions, in the national sample, 24% of females and 45% of males were attending colleges or universities. Accordingly, their KAP regarding sexual health differed substantially. In the national sample, 88% of males and 67% of females are currently married; 71% males and 50% females reported to have learned about sex education from friends, and 23% of males and 8% of females through books/videos; 88% of males and 94% of females have heard about AIDS, and while 88% of females have heard about contraception only 25% of males reported knowledge about contraception. On the other hand, among students enrolled in Karachi, a very small percentage of females and none among males were married. Besides, the findings suggest, that they differ substantially in social norms as compared to youth in rural areas and smaller cities. However, among those enrolled in colleges/universities, while knowledge about contraception is quite high among both among males and females, their attitudes about critical areas such as use of contraception are still negative. Our results clearly point out that youth need to be reached out otherwise they will remain a hindrance to curbing high fertility in Pakistan.

On the Life Cycle of Bare Branch Families in Contemporary Rural China

Quanbao Jiang

Institute for Population and Development Studies,
Xi'an Jiaotong University, Xi'an, China
e-mail address: recluse_jqb@126.com

China's gender discrimination and son preference have resulted in a large number of males of marriageable age who are unable to find wives; these males are called bare branches. In the paper we first define the bare branch family and divide its life cycle into three stages, namely co-residence with both parents, co-residence with the surviving parent, and living alone. From China's 2000 census, and using life table techniques, we find that up to age 60, the bare branch faces a cumulative probability of 0.8 of his father's death, and of 0.6 of his mother's death. The definition of the age at which bare branch status is initialized influences the length of the stages of co-residence with both parents and with the surviving parent, but has little impact on the stage of living alone, which lasts about 16 years. As the childbearing age of parents increases, the age of a bare branch at the death of his parents decreases, and the duration of his living alone lengthens. An increase in the mother's childbearing age, holding that of father constant, will shorten the stage of co-residence with both parents, and lengthen the stage of living alone.

Oral presentation

Challenges Facing National Policy Makers in Low-fertility Asian Countries: The Case of Indonesia

Adrian C. Hayes

Australian Demography and Social Research Institute,
The Australian National University, Canberra, Australia
Email address: adrian_hayes84@yahoo.com

Family planning (FP) programmes have important contributions to make to reproductive health (RH), poverty reduction and quality of life even in countries where fertility has already declined and is close to replacement level. In many ways, setting policy today for FP/RH in Asian countries with low fertility is more complex than was establishing the “classical model” of a national FP programme thirty years ago. National policy makers have been struggling with these issues, but the challenges are often not well understood and are frequently underestimated by donors wanting to lend their support. The aim of the paper is to provide a holistic framework which can help national policy makers (and their partners) resolve conflicts, arising from the many demands currently being placed on FP and RH programmes, in a systematic, equitable and transparent fashion, and with results that best improve RH, reduce poverty, and enhance quality of life.

This paper uses Indonesian data and experience to examine in depth, four broad areas of social and demographic change which make policy making for FP and RH especially difficult today. The experiences of other Asian countries are also discussed, but more briefly, to add a comparative perspective. First, we look at how the changing demographics of a population, as it goes through the demographic transition add to the complexities of providing appropriate services. Second, we review changes in the international development agenda which can impact on national policy formulation. Third, we discuss additional policy and the management challenges associated with decentralization. Finally, we examine the practical difficulties of incorporating “good governance.”

Fertility Decline and Family Planning in Bangladesh

Barkat-e-Khuda¹ and Samiha Barkat²

¹ Department of Economics, Bureau of Economic Research,
University of Dhaka, Bangladesh; ² Independent Consultant, Bangladesh
Email address: barkatek@yahoo.com

Bangladesh, the seventh most populous country in the world, with a population of around 160 million, growing at an annual rate of around 1.4%, is projected to increase (according to a UN estimate;) to 185.6 million by 2020 and further to 222.5 million by 2050. The large population size, density, dependency ratio, percentage of population in the reproductive ages, and increasing proportions living in urban areas place an enormous burden on the country's limited resources.

This paper analyzes trends in fertility decline and contraceptive use in Bangladesh from 1975-2007, and examines the contribution of the family planning (FP) programme and socio-economic changes to fertility decline. It is based on data from the Bangladesh Demographic and Health Surveys from 1975-2007. Bivariate and multivariate analyses have been undertaken.

During the 1960s, the total fertility rate (TFR) was high (above 7). It declined to 6.3 in 1975, remained above 6 until 1981, and declined to 5.1 in 1989. Compared to the 1960s and 1970s, fertility declined by 2 children and one child, respectively, during the 1980s. Between 1989 and 1993-94, it declined sharply from 5.1 to 3.4, much slowly thereafter to stall at around 3.3 during 1994-2000, and then declined slowly to 3 in 2001-03 and 2.7 in 2007. The fertility transition can be categorized into three phases: high fertility until the early-1980s, a rapid decline between 1989 and 1993-94, and stalling and/or near stagnation in fertility decline since the mid-1990s.

There are sharp differentials in fertility by characteristics of women. Rural women give birth to half a child more than urban women. Fertility is lower among women who have completed secondary schooling (2.3) than those with little or no education (about 3). Women in the highest wealth quintile have one less child (2.2) than those in the lowest wealth quintile (3.2). Those who have ever used contraception and have access to mass media have lower fertility than those who have not. Analyzed by Divisions, Khulna has reached replacement level fertility and Rajshahi is close to reaching replacement level, while fertility is considerably higher in Sylhet (3.7) and Chittagong (3.2) divisions. Logistic regression results are in the same direction.

The contraceptive prevalence rate (CPR) increased six-fold from 7.7% in 1975 to 44.6% in 1993-94. Thereafter, it increased slowly, and declined between 2004 and 2007 (from 58.1% to 55.8%). Also, the relative share of long-term methods declined from 47.8% of modern method use in 1989 to 31.5% in 1993-94, and then, sharply declined to less than 14% during 2004-07. It is, therefore, not surprising that the rate of fertility decline also slowed down since the mid-1990s. The decline in the rate of increase in CPR since the mid-1990s resulted in a stalling and/or near stagnation of fertility decline that could be attributed to programme related issues: (i) organizational weakness of the programme, (ii) regional variations in contraceptive use, (iii) low contraceptive use among young women, (iv) low fieldworker visitation, (v) declining trend in the relative share of longer-acting contraceptive methods, (vi) high discontinuation rate, (vii) high unmet need for contraceptives, (viii) low future intention to use contraception, and (ix) limited male involvement.

Major positive socio-economic changes affecting the desire to have children, included rise in female education, employment, mobility, women's empowerment, and access to the media; while negative changes included increasing landlessness, worsening land-man ratio and shrinking employment opportunities in the agricultural sector. It is doubtful whether the sharp decline in TFR from 5.1 to 3.4 would have been possible in the absence of these positive changes. However, the stalling/decrease in fertility decline is largely due to weak programme efforts discussed above.

In order to reverse this stalling and/or stagnation, the government should prioritize and reposition the FP programme as part of its overall development programme by addressing its various weaknesses. Without that, further fertility decline will not be possible and the goal of reaching replacement level fertility will continue to be delayed with serious adverse consequences. Thus, lessons learned from Bangladesh indicate that both a strong FP programme and socio-economic development are required for sustained fertility decline. It is imperative that the government strengthen its FP programme efforts in addition to its development initiatives to reverse the stalling/decrease in fertility decline.

The Socio-economic, Cultural and Demographic Correlates of Fertility Decline in Iran

Fatemeh Torabi¹, Angela Baschieri², Lynda Clarke³, Mohammad Jalal Abbasi-Shavazi⁴

¹Department of Demography, Faculty of Social Sciences, University of Tehran; ²Department of Population Studies, Faculty of Epidemiology and Population Health, London School of Hygiene and Tropical Medicine; ³Department of Population Studies, Faculty of Epidemiology and Population Health, London School of Hygiene and Tropical Medicine; ⁴Department of Demography, Faculty of Social Sciences, University of Tehran and Australian Demographic and Social Institute, Australian National University
Email address: fa.torabi@googlemail.com

In just 15 years, Iran experienced an unprecedented fertility decline: from 6 children per woman in 1985 to only 2 in 2000. This reduction happened during a period of socio-economic change and within a multi-ethnic context. By applying theories of fertility change, we aim to gain more insight on the extent to which the recent fertility decline has been influenced by the process of development, changes in women's socio-economic status, ethnicity, and such demographic factors as women's marriage timing, child mortality, sex preference, etc. We apply a discrete time hazard model to the data from the 2000 Iran Demographic and Health Survey and a range of time-varying district-level contextual variables derived from two rounds of Iranian censuses (1986 and 1996) to assess the contribution of the aforementioned factors to the probability of progression to second and third conceptions during 1986-99. The findings suggest that (1) the recent decline in the probability of second and third conceptions was related to improvements in women's education, reductions in child mortality, and children's higher enrolment in education; (2) the probability of second conception was also influenced by women's participation in the labour force and industrialization; (3) son preference contributed to the conception of second child; (4) ethnic patterns of the probability of progression to second and third conceptions were strongly related to ethnic differences in the socio-economic and demographic forces as the effect of ethnicity generally disappeared after accounting for these factors.

A Survey of One-child Families in Beijing

Yafei Hou¹ and Xiaohong Ma²

Beijing Population Research Institute,
Beijing Administrative College, Beijing, P.R. China
Email address: miguillo@sas.upenn.edu

China has followed a one-child policy for 30 years. The only-child generation is fast reaching the age of marriage and childbearing. This paper examines two questions: what happens to the only-child generation in China and what challenges will the Chinese population have to face now and in the future?

Fertility levels are low in the population in China. In the beginning of the 1970s, families had an average of six children. Now the Total Fertility Rate (TFR) averages 1.7, or fewer than two children per family. In the next twenty to thirty years, only-children living in China's cities will form the main childbearing group. At present, the number of only-children in China as a whole has grown to about 100 million.

In 2002 and 2008, my institute surveyed only-children of both urban and rural families in Beijing, focusing on those between 20 and 34 years as well as their parents. This paper focuses on 'the desires and behaviors of only-children'.

Findings show that most respondents prefer to have one child, and though most approve of the idea of "two children," they did not choose to have a second child. However, the ideal number of children increased with marital situation. The trend of childbearing desire is the same in rural and urban areas. In fact, traditional ways of thinking seem to have almost disappeared in Beijing; 60% of the respondents chose 'either would be a pleasure'; the preference for 'having both a son and a daughter' ranked lowest in both surveys. In response to "who has the most influence on childbearing decisions?", most respondents chose myself' as the answer. Respondents also tend to marry and have their first baby at later ages. Further, increasing proportions of couples are living independently. A substantial percentage of babies (50-70%) are raised by grandparents, but both our surveys show that the number of married couples who raise their own children is increasing. When asked to describe the difference having a child makes in their life, respondents, being only children themselves, who were 'little emperors' born into a comfortable urban setting, replied that caring for their own children gave them new insights into the responsibilities of a family and even work.

In conclusion, that respondents tend to have only one child indicates a trend towards a low birth rate in the future. It also points, however, to the dilemma of low fertility and an increasing population; although the TFR is only 1.7, in the next 20 years, some 200 million people will be added to China's population. Moreover, if the extremely low TFR continues, China will soon have to take on the challenges posed by a huge ageing population, as well as a rapidly declining labour force.

Labor Force Participation in Later Life

Ramesh Adhikari^{1,2}, Fariha Haseen² and Kusol Soonthorndhada²

¹Geography and Population Department, Tribhuvan University, Kathmandu, Nepal; ²Institute for Population and Social Research, Mahidol University, Thailand

Email address: rameships@gmail.com

The labor force participation rate is an important indicator of the state of the labor market and a major input into the economy's potential for creating goods and services. The objective of this paper is to examine the prevalence of labor force participation and to investigate the factors affecting labor force participation in later ages in Thailand.

The data for the study were drawn from the "2007 Survey of Older Persons in Thailand". Stratified two-stage random sampling was used for data collection and the analysis was restricted to the population aged 60 or above. Univariate, bivariate and multivariate analyses were performed. Bivariate analysis was used to identify factors associated with labor force participation. The variables were further examined by multivariate analysis (binary logistic regression) in order to identify significant predictors of the likelihood of participating in the labor force at older ages, after controlling for other variables.

Overall, 30,427 elderly people aged 60 or above were interviewed. More than half of the sampled respondents (53%) were aged 60-69 years, while about one out of seven were (13%) aged 80 years or above. Overall, more than a third of the elderly (35%) were participating in the labor force within the past seven days preceding the survey. The analysis found that age, sex, place of residence, level of education, marital status, number of children, household headship, living arrangement, average total income per year, worked for the government/government enterprise, currently in debt, functional status, number of chronic diseases and self assessed health status were significant predictors of labor force participation. Older respondents (OR=0.47 for 70-79 and 0.21 for 80+ years), females (OR=0.56), widowed/divorced (OR=0.85), those living with their children (OR=0.69), those whose family income was low, and those who worked in government sectors (OR=0.33) were less likely to participate in the labor force than their respective counterparts. On the other hand, those who lived in urban areas (OR=1.2), had a low level of education (OR: secondary 1.8, primary 2.4 and no schooling 2.5), who were the household head (OR=1.9) or were in debt (OR=2.3) were more likely to be involved in the labor force than their compared groups. Furthermore, respondents who had more difficulty in performing their daily living activities, suffered from more chronic diseases, and who assessed their health as poor, were less likely to participate in the labor force than their counterparts.

In conclusion, labor force participation in later ages is not uncommon for the Thai elderly, with many factors determining the participation of old people in the job market of Thailand. Educational status, current debt, headship of household and place of residence are the most significant predictors. The results of this study suggest the need for policies that encourage employment among older persons, the role of continuing education, financial management practices and a special focus on the rural elderly population.

Linkages between Health and Work Force Participation of the Elderly in India: An Investigation

Dhananjay W Bansod and T S Syamala
Institute for Social and Economic Change, Bengaluru, India

Considerable increases in the absolute and relative numbers of the elderly population have been one of the major consequences of the demographic transition worldwide. Ageing is occurring rapidly even in developing countries, including India, mainly due to the combined effect of prolonged fertility and mortality decline and consequent increase in life expectancy. According to 2001 census figures, nearly 7.5 percent of India's population, as much as 77 million are above 60 years of age. Such a rapid rise in the elderly population gives rise to several challenges. Along with other problems, lack of ensured and sufficient income to support them, absence of social security, and persistence of ill health are some of the daunting problems faced by the elderly in the country. Because of this, a substantial proportion of the elderly continues to feel the pressure to earn a livelihood to support themselves and their families. At the same time, with the advancement of age, the elderly are exposed to various kinds of health problems which restrict their labour force participation. An attempt, therefore, has been made in this paper to understand the dynamics of health of the elderly and their labour force participation in India.

Data from the National Sample Survey, 60th round, and Census of India was used for the study. The health of the elderly was assessed using information on disease patterns, disability and treatment seeking behavior, and hospitalization. Bivariate and multivariate analyses were employed to understand the nexus between health status and work force participation of the elderly. A regional level analysis was also carried out to examine the phenomenon in detail.

Older Persons Labour Market: An Indonesian Case

Evi Nurvidya Arifin

Institute of Southeast Asian Studies, Singapore City, Singapore

Email address: enarifin@gmail.com

Promoting an increase in labour force participation of older persons has been high on the agenda of countries facing ageing populations. Previous studies have found that labour force participation rates among older persons are usually much higher in developing countries than in developed countries. The findings of this paper, derived from the 2000 population census of Indonesia, show that more than 60% of older persons were economically active in the labour market. The rate remains high after taking into account the socio-economic-cultural and demographic characteristics. Compared with the respective reference group, the results from logistic model show that male, young elderly, ever married, low educated, non-migrants and Christians, are more likely to be economically active as employees or job seekers. Inadequate old age income security and other social safety nets, a weak financial market, and poor macro economic conditions may have forced older persons in Indonesia to work. Working can be the only means of financial support during old age. Though the Indonesian economy has experienced a tremendous change, moving away from agricultural to service sectors, agriculture still plays a big role in providing jobs for older workers who are mainly self-employed. Results from multinomial logit show that all the selected socio-economic-cultural and demographic variables are significantly associated with employment sector and employment status. Working in the agricultural sector and as self-employed individuals, as among older persons, suggests the need for working-hour flexibility but indicates their economic vulnerability as there is no pension.

Work Ability and Empowerment for Older Persons in Indonesia

Lilis Heri Miscicih

University of Indonesia, Indonesia

Email address: mcicih@yahoo.com

Indonesia is one of the countries that has faced the ageing issue. The proportion of older persons over 60 years of age is projected to increase from 9% in 2009 to 14% in 2025. This phenomenon raises concerns for socio-economic planners. Identifying economic and social implications, health needs and coping mechanisms as well as appropriate policy and social protection responses for these older persons are vital in order to better understand and prepare for the multiple impacts on older persons. A complex picture emerges when looking into the economic well-being of older persons. The opportunity remains to optimize on the demographic window to increase productive employment, per capita income and the pension saving rate. This paper explores the demographic and socio-economic well being of older persons. We have also examined living arrangement, intergenerational transfer, work ability, health status, and empowerment programmes for older persons. The results of the 2008 National Social Economic Survey data analysis indicate that the number of older persons in 2008 was 18.9 million. Most of the older persons had low socio-economic status, such as low education, and were poor and vulnerable. Around 45% of the middle-aged and 56% of the grand-old female and rural older persons were illiterate. Most of older persons (83%) did not finish primary school. Around 15-23% of them were poor, higher than the national average of 15%. The grand-olds, women and rural older persons were the poorest. The data also indicates the living arrangement of the older persons — 30% of the older persons were living with three generations under one roof; however, among them, single households were apparent. Those who lived alone were mostly the oldest persons living in rural areas and women. Findings further showed that intergenerational transfer varies by region and culture. In East Java, for example, older parents provided transfer to their children or grandchildren, while in West Sumatra, older parents are mostly receivers. In the future, children will no longer be able to accommodate the elderly. Indonesia has limited social protections for older persons. The number of older persons receiving social services is around 11.9 thousand, whereas the total number of vulnerable older persons was around 2.7 million. The government only provided a monthly allowance of Rp 300,000 per individual for 10,000 vulnerable older persons in 2009. The rest still have to work, even 17% of the grand-old are still working. Most of them work in the informal sector, those living in rural areas work in agriculture, and those living in urban areas work in the service sector. However, 30% of the working, older women are unpaid. The study also analyzed some empowerment programmes which are conducted to maximize the potential of older persons such as business groups and productive economic businesses.

Climate Change Implications on Human Livelihoods and Security: Lessons from the Ganges-Brahmaputra and the Mekong Delta Regions in Asia

Vigya Sharma and Graeme Hugo

University of Adelaide, Australia

Email address: vigya80@gmail.com

There is now sufficient evidence that changes in global climatic conditions are inevitable. Furthermore, it has also been established that those sections of the society which are already disadvantaged will be particularly vulnerable to these changes. With respect to population vulnerability, two issues remain of primary concern: first, direct and indirect socio-economic vulnerability to climate change and second, which to a large extent follows on from the first, lack of a sense of terrestrial belongingness and thus, an increasing trend of displacement and resulting conflicts. Together, these two concerns result in a vicious circle of further vulnerability of disadvantaged populations and enhanced socio-economic deprivation. This paper attempts to disentangle the complex 'climate change-migration-vulnerability-security' syndrome for two of the world's largest and most populous deltas: the Ganges-Brahmaputra and the Mekong in South and South East (SE) Asia, respectively. The paper makes a critical analysis of the large volume of empirical study regarding present and future climate change impacts in the delta areas and their implications for potential migration and related human security in the region. Lessons distilled from the two regions are presented and discussed as a basis for framing policy responses to address security implications of climate change not only in the region but also across other developing parts of the world. Finally, the vital role that effective governance and innovative regional cooperation structures will play in tackling increasing vulnerability and human security challenges across the region is discussed.

Energy Access and Poverty in Households of Brazil, China, India and Indonesia

Regina Fuchs¹, Shonali Pachauri¹, Leiwen Jiang² and Katarina Zigova¹

¹International Institute for Applied Systems Analysis (IIASA), Austria;

²Brown University, Rhode Island, USA

Email address: fuchs@iiasa.ac.at

Emerging economies like India, Brazil and Indonesia are among the world's most populous and fastest growing. Despite their impressive growth record in recent years, in per capita terms, their emissions remain far below those of the OECD countries. Besides, they are home to a large proportion of the energy poor population of the world. A quarter of the globe's inhabitants still live without access to electricity and almost half of them live in these four countries. Similarly, of the approximately three billion people globally, still dependent on solid fuels like unprocessed biomass, charcoal and coal, about half are concentrated in these four nations. The continued dependence on inefficient energy sources among poor and rural households has a significant cost for these countries. A transition to more efficient energy sources and/or devices for these households would result in significant social, environmental and economic benefits. The most important benefits include significant positive health impacts, largely for women and children, and the additional prospects of using time freed up in more productive work or education. Social benefits are also likely to result from reduced daily drudgery, injuries and accidents involved with solid fuel collection and use, and the improved communications and lighting that would result from electrification. Both local and global environmental benefits can accrue from the reduced emissions of particulate matter, black carbon and other greenhouse gases associated with the burning of solid fuels in traditional inefficient devices. In addition, lower biomass demand would reduce the pressure for further degradation of soils and forests. Most importantly, the economic returns from providing access are also high particularly, if the policies and programmes designed for this have built-in elements that encourage the productive uses of energy to create new employment and income generating activities. The role of energy in powering rural agricultural and small enterprise development is, in particular, critical to ensuring food security and has a proven impact on poverty reduction. All four countries have achieved different degrees of success in increasing access to modern energy for their poor and rural populations. Differing levels of growth and development and rates of urbanization have also resulted in differences in the choices of energy sources and demand levels among households across the four nations. This paper undertakes a comparison of the levels of energy access and consumption among households across these four nations in order to assess how energy poverty, access, and equity in energy access and use differs across the countries and why. In addition, we draw lessons from the experiences of each of these countries for other countries and for access and energy poverty reduction policies in general.

The impact of environmental conditions on population health

Zhongwei Zhao

Shanghai, Hong Kong and Taiwan mortality study research team,
Australian National University, Canberra, Australia
Email address: Zhongwei.Zhao@anu.edu.au

One of the major challenges facing the world is to get a better understanding of environmental changes and their wide range of effects on future sustainable development and the wellbeing of human kind. Among these effects, the impact of environmental changes on the health of populations is arguably the most important. While such impact has long been noted, detailed investigations into it are still limited, especially in the case of less developed countries. The importance and urgency of improving our knowledge of the health impact of environmental conditions are reinforced by the sheer scale of the problem, the size of the population at risk, and the acceleration of global warming. In Asia, for example, a large number of people live in regions vulnerable to natural disasters such as floods drought, typhoons, earthquakes, tsunamis and rising levels of pollution that are closely related to their ongoing industrialization. Each year, many deaths result from extreme weather conditions, severe pollution, environmental degradation and various kinds of natural disasters. If global warming indeed takes place as predicted by most environmental scientists, extreme weather conditions will increase. Areas threatened by natural disasters will grow. New diseases and some previously rare ones may break out on a large scale. The number of deaths brought about by these changes may reach an unprecedented level. These potential changes not only pose a serious challenge to further improvement in population health, but also greatly threaten population security in the world. To improve our knowledge of the health impact of environmental conditions, researchers from the Australian National University; Fudan University; Hong Kong University of Science and Technology; Monash University; Shanghai Municipal Center for Disease Prevention and Control, and University of Cambridge have been jointly conducting a number of interrelated studies. To date, a large amount of demographic and environmental data has been systematically collected. The major objective of these studies is to undertake a detailed and comparative investigation into health and mortality transition in East Asia and to get a better understanding of the impact of environmental conditions on the health of the population. This paper reports our latest research findings on the seasonality of death in Shanghai; daily mortality patterns in Shanghai, Hong Kong and Taiwan; and the interrelationship between weather conditions, air quality and variations in daily mortality patterns in the study areas.

Change in the Air: Barriers to Climate Change Adaptation in Rural Western Australia

Ann Larson and Peter Howard
Combined Universities Centre for Rural Health, Geraldton, Western Australia
Email address: ann.larson@socialdimensions.com.au

Midwest Western Australia is an area of mainland Australia most likely to be impacted by climate change. Conventional dry land agriculture will undergo considerable change if predicted changes to rainfall and temperatures occur. Strategies are required to enable citizens to reframe climate change so that it is perceived as immediate and serious. However such reconceptualization challenges existing values and impinges on individuals' support for government and personal action.

This study was commissioned by a non-government organization (NGO) tasked with fostering sustainable land use practices. It is part of a larger programme designed to raise knowledge and promote behavior change. With farmers as their target audience, the NGO sought to identify the relationship between attitudes regarding climate change and traditional land management practices. This group anticipated that recognition of climate change, support for climate change adaptation and best practice land use would be highly correlated.

We investigated the nuanced attitudes towards climate change adaptation in two surveys of farmers and town residents taken in 2008 (N=602) and 2009 (N=353). Cluster analysis segmented the sample into groups sharing common attitudes towards climate change, environmental and economic values and government and personal action.

Others have reported that a high proportion of residents in this conservative rural region believe that climate change occurs as result of human behaviour. Our findings of cluster analysis produced five clear target groups which demonstrate that believing in climate change is not the only factor that affects attitudes to adaptation. We characterized these clusters as: pro-development, moderates, unconvinced, motivated and activists. We found that the only group that did not agree that climate change was real had very strong pro-economic development values. They dismissed environmental values and trusted that landowners would make the right decisions. This was the smallest group, comprising 15% of the sample. All the other groups believed in climate change but with different degrees of conviction. The 'unconvinced' would support government action, in the form of incentives, if they could be more convinced about the reality of climate change. The 'motivated' are convinced about climate change but are not sure if landowners or governments can take appropriate action. 'Activists', who amount to almost one-quarter of the population, may not be the best people to convince others because of their low regard for economic development and landowners' rights – values that other groups are unlikely to relinquish. The full version of the paper also explores the demographic characteristics of each cluster.

We conclude that the strength of this research is that it places climate change within the context of related issues. Messages need to target attitudes which are amenable to change in order to promote support for individual and government action. For some groups this means more information on the direct consequences of climate change. Other groups need to be convinced that government or personal action will be effective. Appealing to environmental values would be advantageous but only if adaptation is conveyed as an economic benefit.

Clusters	Climate change is	Protecting the	Economic developmen	Landowners have rights	Supports government	Is personally
----------	-------------------	----------------	---------------------	------------------------	---------------------	---------------

	real & serious	environment is important	it is important	to take actions which might be bad for the land	action on land use and climate change	active in good environmental and climate change mitigation
Pro-developers	Low	Low	High	High	Low	Moderate
Moderates	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Unconvinced	Moderate	High	Moderate	High	High	Moderate
Motivated	High	High	Moderate	Moderate	Moderate	High
Activists	High	High	Low	Low	High	High

Concerns and Access for Reproductive Health Services among Migrant Men in Bangladesh

S M Shariful Islam

Ministry of Health and Family Welfare, Dhaka, Bangladesh

Email address: drsislam@gmail.com

The reproductive health (RH) of the population of developing countries is a matter of concern for public health policy makers especially in the case of migrant populations. Despite decades of sustained effort, progress in improving the reproductive health status of the population has remained slow and strategies poorly understood.

This study aims to understand migrant men's RH concerns and their access to service providers.

The study was conducted in a sub-district of Cox's Bazar in Bangladesh. This is one of the lower performing areas in terms of health and family planning performance indicators with almost 30,000 migrant people from Myanmar. One thousand households were randomly selected and 693 married men interviewed from these households. Out of the 693 respondents, 5% were re-interviewed to maintain integrity of the data.

Results indicate that the mean age of the respondents was 41.24 years with a median of 40 years. 57% of the respondents did not have any formal education and 35% had less than five years of formal schooling. Further, 48% respondents stated that they had STD concerns and of these, 63% had received treatment (formal or informal) for their concerns. Leading STD concerns included shortened duration of sexual intercourse (40%), frequent urination/incontinence (32%), loss of semen/nocturnal emissions (25%), burning or pain when urinating (22%), and difficulty to maintain an erection/impotence (18%). The majority of the men (66%) had received treatment from private doctors. A large number of them also sought care from informal providers such as traditional herbalists (45%), village doctors (39%), roadside pharmacists (19%), homeopathic practitioners (25%), and street vendors of herbal medicines (13%). Knowledge of any modern method of family planning was low (39%) compared to national data. Respondents also reported difficulty in obtaining family planning methods and the unmet need was 56%.

To sum up, our findings show that migrant men are very concerned about STD. Most of their concerns are psychosocial and anxiety based such as those related to sexual performance. Our study also revealed that they explore multiple options of care, ranging from self-care to traditional and modern medicine. Knowledge and use of family planning methods were low compared to national averages with high unmet needs. Implications for programmes, policy, and/or research are: STD prevention programmes should be developed considering the cultural needs of migrant people; and, access to services should be improved with special programme support by the national government and other stakeholders.

Cross-border Marriage and Work Behavior among Male Muslim Migrants in Japan

Hiroshi Kojima

Waseda University, Tokyo, Japan

Email address : kojima@waseda.jp

This study analyzes the effects of cross-border marriage on work behaviors among male Muslim migrants in Japan, applying logit models to microdata from the Social Survey of Muslim Population (SSMP) in Tokyo Metropolitan Area conducted in 2005/2006. It also presents the results of bivariate analyses of the 2000 Population Census microdata, which reveal that Pakistani men have a higher proportion of being self-employed, particularly when they are married to a Japanese woman, and that the positive effect of cross-border marriage on self-employment is also found among Bangladeshis, Indonesians, Iranians and Malaysians. Bivariate analyses of the SSMP microdata shows that the proportion of being self-employed increases with age and that the proportion of being an employee peaks in the early 30s. Logit analysis reveals that the odds of being self-employed relative to being non-employed are higher among those married to a Japanese woman. The study also presents the results of analyses for determinants of job regularity, job search methods and the number of employees in the workplace.

**The Impact of Male Labor Migration to Persian Gulf Countries on the Status of their Women
Left Behind in South of Iran**

Jamileh Alihosseini¹ and Amir Houshang Mehryar²

¹Ab Andishane Consulting Planners, Tehran;

²Institute for Research on Development Planning, Iran

Email address: ¹jalihoseini@yahoo.com

Men's labor migration, as they leave their wives behind, is one of the most common forms of migration, in many African, Latin American and Asian countries. Their remittances may lead to various changes in the living style, the status of family members and consumption patterns. This fact has had special impact on the position of women in both the family and society. Iran is a country in which migration to Persian Gulf countries is common and this can be particularly seen in its southern areas. Under this circumstance, women are supposed to spend an enormous amount of time without their husband. In this research, the impact of male migration to Persian Gulf countries on wives who are left behind has been studied and the findings compared with similar cases in other areas around the world. This study was conducted in Lamerd, a southern Iranian town, and the participants were 408 women. The results indicated that the economic achievements between families with a migrant husband and those without are evident in rural areas, but this difference is absent in non-rural areas. Although migration has led to an increase in women's freedom in terms of geographical movement and decision making ability in their families, their social activities have not changed. It seems that in the area under investigation, men's migration has not been recognized as an opportunity for women's societal activities owing to the dominance of patriarchal traditions. It seems that migration plays a more significant role in situations in which women are faced with more limitations and vulnerability. For instance, male migration results in some differences between the wives of migrants and other women in rural areas or among low-educated women. Finally, majority of migrants' wives endure more hardship and accept more responsibilities because of the absence of their husband and they wish their husbands returned and could find a good job in their home settings.

Reproductive Health of Afghan refugee Women living in Karachi, Pakistan: Does Health Subsidy Matter

Mehtab Karim, Hina Ladha and Sarah Saleem

The Aga Khan University, Community Health Sciences Department, Karachi, Pakistan

Email address: mehtabkarim@gmail.com

Refugees originating in conflict zones, usually have high fertility desire, even when they have access to family planning (FP) services. In the 1980s, over three million refugees migrated from Afghanistan to Pakistan; of these, thousands of families settled in Karachi city, with support from UNHCR and an NGO, Focus Humanitarian. The latter registered each family and provides them with subsidized health care whereas the group supported by UNHCR has no such arrangement and relies on services available to the general population. Several studies have shown that refugee women are at a higher risk of facing reproductive health problems and need individual attention, particularly with regard to the use of reproductive health services. Against this background, we conducted a study to assess and compare knowledge and use of FP and safe motherhood services among two groups of currently married Afghan refugee women, residing in Karachi – those who were receiving health subsidy and those who were not receiving it. We hypothesized that the women who get health subsidy will have better reproductive health indicators as compared to the non-health subsidy group.

Based on the Census of Afghan refugees conducted in Karachi in 2007, systematic random sampling technique was employed to interview women in reproductive ages, who had been pregnant at least once in their lifetime, residing in proper housing (flats/apartments) in Karachi and who consented to participate. A total of 350 women in each group were interviewed in 2008. Bivariate and binary logistic regression analyses were used to analyze the data.

Findings revealed substantial differences between the two groups regarding knowledge and use of FP methods (89% in the health subsidy group had knowledge and 54% were current users, against 45% and 25%, respectively, in the non-health subsidy group). Over 80% of women from the health subsidy group had received antenatal care versus 61% in the non-health subsidy group. During their last delivery, 82% of women in the former group had received skilled birth attendance against 55% in the latter. Similarly, more women in the health subsidy group had received post natal care (PNC) (33% versus 7%, respectively). After adjusting for socio-demographic variables, the odds receiving antenatal care (ANC) in the health subsidy group was 2.2 times that in the non-health subsidy group (OR adj 2.2, 95% CI: 1.2- 4.2). Further, the odds of having a skilled birth attendant at birth in the health subsidy group was 3.7 times higher than that in the non-health subsidy group (95% CI: 1.9- 7.2), and women in the former group had received 4.8 times higher PNC compared to the non-health subsidy group (95% CI: 2.0-11.4). When adjusted for other variables such as duration of stay in Karachi, gravida and family type, the interaction between age and FP was also significant in final model (OR adj: 0.3, 95% CI: 0.01-7.5 for age 25 and OR adj 1.1, 95% CI 0.03-36.8 for age 35). One reason could be that women receiving health subsidy had fewer children; therefore, their FP use was low but with increase in age as they achieve their desired family size (for example, from age 25 to age 35), they start using FP methods.

Our results suggest that refugee women having health coverage are significantly more likely to practice FP methods and report better utilization of safe motherhood services. It is, therefore, recommended that refugee populations should be given proper health care coverage in order to improve contraception and safe motherhood services with the aim of decreasing their fertility and improving their reproductive life span.

Rising Singlehood in East and Southeast Asia: Trends and Implications

Gavin Jones and Zhang Yanxia

Asia Research Institute, National University of Singapore, Singapore

Email address: arigwj@nus.edu.sg

The rise in singlehood in East and Southeast Asia and its correlates has been traced in some detail in earlier publications of the first author. The main thrust of this paper, however, will be to discuss some of the implications for the singles themselves, their families and for the wider society. This discussion will be based on projections of proportions single in older age groups as the cohorts now aged in their 30s and 40s move into older ages; and on fieldwork to be conducted through 2010 by the two authors, in Singapore and Beijing, to examine the comparative situation of singles in these two cities influenced by Chinese cultural traits but with very different political and economic systems. Singapore has much higher proportions single in their 30s and 40s than Beijing, but unlike other cities in the region, proportions single at these ages have levelled off. In contrast, singlehood at these ages is increasing rapidly in Beijing and has already occasioned considerable comment and debate in the media. The three main thrusts of the study are: (1) to study how people's gender perceptions and career aims influence their choices and decisions on marriage; (2) to understand the relationships between singles and their families of origin; and (3) to investigate the role of state dating services and private matchmaking agencies in these two cities. Focus groups, detailed interviews with singles and interviews with policymakers in the two cities will form the basis for this study.

Inter-caste Marriages in India: Has it really changed over time?

Kailash Chandra Das¹, Kumudini Das², Tarun Kumar Roy¹, Pradeep Kumar Tripathy³ and Vandana Gautam¹

¹International Institute for Population Sciences (IIPS), Mumbai;

²Pillai's College of Arts, Commerce and Sciences, Navi Mumbai;

³Department of Statistics, Utkal University, Bhubaneswar, Orissa

Email address: daskc@yahoo.com

Caste is an integral component of Indian society, prevalent since thousands of years. It is a social evil which creates watertight compartments between communities and brings division, hatred and tension among social groups. Marriages within the caste are the norm of Indian society. To think of marriages between castes is a difficult and socially unacceptable proposition. The process of modernization, democratization and development has brought many positive changes in Indian society. The major objectives of the present study are to understand the patterns and factors of inter-caste marriages as well as changes in India. The study uses data from the recently concluded nationally representative National Family Health Survey, NFHS-3 (2005-06) with a sample size of 43,102 ever married women and their husbands. All the castes are grouped into four categories and arranged in descending order of caste hierarchy namely, higher castes, other backward classes, scheduled castes and scheduled tribes. If a woman belonging to a higher caste marries a man belonging to a lower caste, it is considered as an inter-caste marriage. Similarly, if a woman belonging to a lower caste marries a man of higher caste, it is also considered an inter-caste marriage. It was observed that about 11% of the total marriages in India take place beyond the same caste which is quite encouraging and a positive sign of change in the society. Of the total inter-caste marriages, 5.6% were of women marrying men belonging to lower castes while another 5.4% were to women belonged to lower castes but the husbands belonged to a higher caste. Findings also showed large spatial variations across states in the pattern of inter-caste marriages. Generally, it is expected that with greater development and education, the force of caste becomes weak and thereby increases the incidence of inter-caste marriages. The southern region of India is socio-economically more developed than other regions. So, applying the same logic, inter-caste marriages are expected to be more common in the southern region than in other parts of India. However, our analysis shows that the incidence of inter-caste marriages is lower (9.71%) only in the southern part of India whereas it is the highest in the western region (17%). Some states show about 20% inter-caste marriages; for example, Punjab (19.90%), Sikkim (20.00%), Goa (20.69%) and Kerala (19.65%). States showing very low percentages of inter-caste marriages are Jammu and Kashmir (4.82%), Rajasthan (3.03%), Chhattisgarh (3.40%), Madhya Pradesh (4.39%), Bihar (6.14%), Meghalaya (2.04%), Nagaland (6.67%) and Tamilnadu (2.96%). Logistic regression analysis shows that age, place of residence, husband's education and religion have a significant effect on inter-caste marriages whereas women's education, household structure, woman's work status, standard of living and mass media exposure do not have any significant effect on inter-caste marriages.

Change and Persistence in Marriage Payments in Vietnam, 1960-2000

Bussarawan Teerawichitchainan

School of Social Sciences, Singapore Management University, Singapore

Email address: bteerawichit@smu.edu.sg

This paper examines continuity and change in marriage payments in Vietnam over the last four decades. Based on innovative data from the 2003-04 Vietnam Study of Family Change, we describe regional differences in prevalence of marriage payments among marriage cohorts that were contracted during Vietnam's three recent major historical periods: (1) the Vietnam War and mass mobilization; (2) nationwide socialist collectivization and widespread economic recession; and (3) market reform and economic revitalization. Further, since ethnographic evidence suggests that Vietnam, along with China and Taiwan, represents one of the few populations in the world where marriage transfers may take place in both directions (Malarney 2002; Engel 1984; Parish and Willis 1993), we evaluate the directions of marriage payments and the extent to which bride price and dowry coexisted. Moreover, we describe in detail, the magnitude of material gifts exchanged between families at the time of marriage and how the content of such exchanges has altered over time. Within multivariate frameworks, we also examine the determinants of marriage payments with particular emphasis on brides' and grooms' socio-economic status and their family characteristics, in addition to cohort and regional influences. Results are interpreted with the aim to understand the changing nature and social meaning of marriage payments as well as the patterns of intergenerational and interfamilial distribution of wealth in the post-socialist society.

The Changing Role of Mehrieh in the Iranian Marriage Market

Abbas Askari-Nodousha¹, Seyed Alireza Afshani² and Aliyar Ahmadi³

^{1,2} Faculty of Social Sciences, Yazd University, Iran,

³ School of Social Sciences, Shiraz University, Iran

Email address: ¹ aaskarin@yazduni.ac.ir

This paper examines an important component of the Islamic custom of marriage in Iran which is called *Mahr/Mehrieh*. *Mehrie* is an agreement between the families of the bride and groom at the beginning of marriage, on the sum of gold coins, money or other economic assets that a man assumes as a debt to pay to his wife in the case of divorce, the wife's request for her *mahr*, or the death of her husband. Since the kind and amount of the *mehr* would be written down on the marriage certificate as a legal contract and the wife is legally entitled to use it as she likes, its implications for later family life, the couple's marital adjustment as well as women's rights has been the focus of current public and legal debate in the country. In spite of the fact that *mehrieh* has a special place in the Iranian family law system, few systematic studies have been carried out to assess recent trends in the economic value of *mehrieh* as well as socio-economic causes and consequences associated with this important part of marriage transactions.

There is superficial evidence to suggest that in recent years, the amount, the form, and the function of the *mehrieh* has shifted in the Iranian marriage market. This pattern has been accompanied by a series of other dramatic changes in the marriage market, including the rising level of women's education, a trend toward later age at first marriage, and the greater involvement of young people in the timing of marriage and the process of mate selection.

This paper analyzes recent trends in the economic value of *mehrieh* and its socio-economic correlates. Data for the study come from a representative sample survey recently carried out among newly married couples in the city of Yazd, Iran. Using the two-stage stratified cluster sampling technique, around 674 newly married women were selected for the study. The survey questionnaire encompassed a wide variety of prospective and retrospective questions on demographic and family issues. Through the analyses of this dataset, this paper examines recent trends in the cost of *mehrieh* among newly married couples and discusses the causes and consequences of the trend.

Sex Differentials in Mortality in Shanghai, Hong Kong and Taiwan

Zhongwei Zhao

Shanghai, Hong Kong and Taiwan mortality study research team

Email address: Zhongwei.Zhao@anu.edu.au

My colleagues and I have been coordinating a number of inter-related mortality studies. These studies have aimed at: first, to build up a major database for mortality studies, and second, to promote detailed and comparative mortality studies, especially in the East Asia region. Up to the present, our studies have already collected four million death records. These records have been collected from some East Asian populations and cover a period of the last 40 to 50 years. Because each death record consists of 15 to 20 variables including causes of death, these mortality data can be examined in detail (for example, by sex, single year of age, causes of death, day, month, year of death, micro-region, places of death (and in some cases) education, marital status, occupation, migration history etc.. We have collected or are in the process of collecting detailed population data and data (in most cases daily) on weather conditions (for the last 40 years) and air quality (for the last 10 to 15 years). These data will allow detailed investigations into the links between sex differences in mortality patterns, and their links with weather conditions and air pollution. We are interested in presenting an introduction to these projects and our comparative study on sex differentials in causes of death, mortality patterns, and perhaps, their links with some environmental factors in Shanghai, Hong Kong and Taiwan over the last 40 years.

Education, Gender and Health in South Asia: Present and Future Perspectives

Samir K C¹ and Harold Lentzner²

International Institute for Applied Systems Analysis (IIASA), Austria

Email address: kcsamir@gmail.com

Contemporary research, primarily in the West, provides a strong case for the negative relationship between formal education and adult health; more education, measured either by level completed or years of schooling, is associated, often in a stepwise fashion, with lower levels of mortality, morbidity and disability.

In this study, we attempt to provide a developing world assessment of that relationship as it pertains to adult disability and apparent sex differentials. To do this, we have used sample data from five South Asian countries namely, Bangladesh, India, Nepal, Pakistan, and Sri Lanka, that participated in the World Health Survey. In each of these countries, we find similar disability patterns by age and sex; increasing levels of disability with age, and women consistently having a higher level of disability than men.

Findings show that increases in formal education are associated with lower levels of disability for both younger and older adults. Moreover, women are more likely than men to have functional limitations irrespective of their level of education. The reasons for this gender disparity have been studied by examining the prevalence of a number of chronic conditions. Using country specific education-based disability and mortality differentials and three estimates of growth in education levels, we projected levels of disability to 2050 to assess the health and human capital benefits obtained from investments in education. Findings further reveal that considering education in the population projection consistently, shows lower prevalence of future disability and scenarios with better education attainment lead to lower prevalence. Our results show that (1) the impact of education on levels of mortality and morbidity needs to be considered in population projections and (2) advances in formal educational attainment may well result in healthier populations.

Although the exact mechanisms are not clearly understood, the literature suggests that formal education is an empowering process providing recipients with a combination of factors, material well-being, knowledge application, risk avoidance, and social and psychological balance which sets a course toward a healthier life compared to those who are less fortunate. It is apparent that the educational dividend identified in our projection scenario should be an important policy goal which, if anything, should be more speedily advanced in those countries and regions that have the greatest need.

Gender Differences in HIV Testing in India: A Special Focus on Maharashtra

Shri Kant Singh and Mayank Singh

International Institute for Population Sciences (IIPS), Mumbai, India

Email address: sksingh1992@yahoo.co.in

With a continuously expanding programmatic response to the HIV epidemic in the country, the Government of India has been enhancing the accessibility and availability of integrated HIV counseling and testing centers (ICTC) by establishing ICTC centers up to district and below-district level as part of strengthening the care and support programme. However, there is increasing evidence to show that the utilization of ICTC services is very low, especially among women. As any effort to reduce women's vulnerability to HIV/AIDS cannot be addressed effectively without gender mainstreaming in the HIV programme, an attempt has been made in this paper to explore the barriers in HIV testing among females and males in India, with emphasis on Maharashtra, one of the six high HIV prevalence states in India. Using the data from the third round of the National Family Health Survey (2005-06), this study has made an attempt, for the first time in India, to show the extent of HIV testing among females and males and also highlights the significant predictors of HIV testing both at national and sub-national levels (with special focus on Maharashtra). The analysis gives an indication that the extent of HIV testing is lower among females in most states. Only South Indian states, along with Maharashtra, Delhi, Manipur and Sikkim showed better performance in terms of HIV testing for females. The extent of testing among females and males differed widely according to their age, place of residence, mass media exposure, household economic status and their work status as well. The extent of HIV testing among females was relatively higher among those who had correct comprehensive knowledge about HIV/AIDS and the associated preventive measures as well. It was also observed that knowledge of any place of HIV testing was comparatively lower among females than males, but across the states, females in Maharashtra performed better in terms of knowledge of place of HIV testing than other states in India. Other factors like individual's age, educational status, exposure to mass media and comprehensive knowledge about HIV/AIDS positively affected knowledge of place of HIV testing for females as well as males. Findings also suggest that in the recent past, females did better than males in that greater proportions of females went for HIV testing during the 12 months preceding the survey compared to males. These findings suggest that although the extent of HIV testing was lower among females, more females who are younger, educated and from economically better-off households have accepted the HIV test more openly. From a policy point of view, it is important to formulate policies and subsequent interventions focusing on those women who still lag behind in HIV testing such as older women, women belonging to rural areas, those who uneducated and from poor families, in order to make the nation more protected against the growing danger of the HIV epidemic on one hand and to strengthen the care and support programme, including minimizing stigma and discrimination, on the other.

**Why Maternal Mortality Continues to be High in India
Learning from Verbal Autopsy of Maternal Deaths in Uttar Pradesh**

R. S. Goyal

Indian Institute of Health Research Management, Jaipur, India
Email address: rsgoyal@iihmr.org

Most maternal deaths are preventable. Yet, a sizable number of women continue to die due to factors associated with pregnancy or post partum complications in most parts of the world, particularly in developing countries. Appreciating its relevance in promoting health and empowerment of women, the Millennium Development Goals have accorded high priority to bringing about a decline in the maternal mortality ratio (MMR). India has one of the highest MMRs in the world. The Registrar General of India has estimated that in 2006, the country had a MMR of around 301 per 100,000 live births. Among Indian states, MMR was highest for Uttar Pradesh (UP) at 517. Maternal healthcare has been at the core of the Government of India's successive national healthcare programmes like Family Welfare, Maternal and Child Health (MCH), Reproductive and Child Health (RCH) and National Rural Health Mission (NRHM). However, in spite of documenting reasonable successes in the reach of antenatal (ANC) and postnatal (PNC) care, safe delivery etc., maternal mortality ratios continue to remain high. Why? This paper discusses the findings of verbal autopsies of 131 maternal deaths reported during the two-year period (2006-8) from the villages of seven relatively backward districts of UP, to seek an answer. This analysis has primarily focused on (gaps in) maternal healthcare practices, access and use of ANC, safe delivery, postnatal care and their socio-economic and programme correlates. It also looked into the extent of understanding and appreciation of danger signs of high risk pregnancies and deliveries. The analysis shows that though most diseased women had lower socio-economic backgrounds (as compared to other women), their inability to access antenatal or other healthcare services was quite glaring. The healthcare system had also failed to reach those (women) who needed it most. Only 27% diseased women receiving ANC is good testimony of the ground realities. Secondly, most women, their relatives and attending healthcare providers failed to recognize the danger signs or risk status during pregnancy or labour. It could be attributed more to lack of knowledge than (over) confidence on the part of the family and attending health care providers that the symptoms or situation does not warrant an emergency response. Thirdly, delay in providing appropriate treatment was colossal. A good proportion of women have died due to delays in reaching a healthcare facility or waiting for treatment. All the three factors; lack of ANC, poor appreciation of danger signs of pregnancy and labour, and delay in accessing medical care put the major share of responsibility of maternal deaths on the shoulders of the healthcare system and providers. Incidentally, it was avoidable.

Factors associated with second trimester abortion in rural Maharashtra and Rajasthan, India

A J Francis Xavier

Population Council, New Delhi, India

Email address: fzavier@popcouncil.org

Research in India shows that many married women experience abortion in their second trimester of pregnancy. Leading reasons include delays in recognising the unintended pregnancy, limited role in making abortion-related decisions, unsuccessful attempts to terminate the pregnancy, concerns about confidentiality, cost, and the practice of sex-selective abortion, typically conducted in the second trimester. While there is an impression that second trimester abortions are now overwhelmingly used for sex selection, little is known about the extent to which second trimester abortions are indeed associated with son preference and sex selection motives, relative to other factors.

The objective of this paper is to explore factors associated with second trimester abortions in rural areas of Maharashtra and Rajasthan. Data are drawn from a community-based survey of 4,600 married women aged 15-39, in two districts each of Maharashtra and Rajasthan. The sub-sample for this paper includes 291 women who had experienced abortion during the five years preceding the interview. Multivariate logistic regression was undertaken to explore the association of sex and order of surviving children at the time of abortion, as well as poverty levels, and such obstacles to abortion as limited decision-making autonomy, previous unsuccessful attempts to terminate the pregnancy, distance to facility, and concerns about confidentiality with experience of second trimester abortion.

Almost one-quarter (23%) of the women had experienced second trimester abortion. The number and sex composition of surviving children at the time of the abortion were indeed associated with second trimester abortion, and it appears that it was those women who wished to limit family size to 2 children and at the same time ensure a son who were more likely to undergo a second trimester abortion than women with other family sizes and compositions. At the same time, son preference was clearly not the only correlate of second trimester abortion. Indeed, our analysis emphasises that poor women were more likely than their well-off counterparts to have experienced a second trimester abortion, even after controlling for other factors. What is most striking however, is the extent to which limited access to safe abortion was associated with a second trimester abortion. Indeed, women who were excluded from abortion related decision making, those who made unsuccessful prior attempts to terminate the pregnancy, and those who resided more than an hour away from the facility in which their abortion was performed were significantly more likely than other women to have terminated their pregnancy in the second trimester, even after controlling for confounding factors.

Findings argue strongly for efforts to reduce the obstacles women face in obtaining abortions. Evidence that sex selection is an important factor underlying second trimester abortions calls for greater efficiency in implementing the PNDA Act in the short run and efforts to change deeply entrenched social norms regarding the importance of sons on the other. However, it is equally important that awareness is raised that poverty and limited access to abortion, more than sex selective abortion, remain central factors underlying second trimester abortion.

Religion and Reality: A Comparative Perspective of Women and Religious Leaders on Abortion in the Holy City of Qom, Iran

Mohammad Jalal Abbasi-Shavazi¹, Meimanat Hosseini-Chavoshi²,
Mohammad Reza Zalie¹ and Fatemeh Sakhaie¹

¹University of Tehran; ²Australian National University

Email address: mjashavazi@gmail.com

Social, economic and cultural changes in Iran have led to the limitation of childbearing over the last two decades. Yet, women's knowledge about contraceptives and their effectiveness is incomplete. This has led to a relatively high rate of unintended pregnancies (around 33 % in Iran as a whole), a significant proportion of which are aborted. In Iran, abortion is only legal for medical but not for social and economic reasons, and is being opposed on moral and religious grounds. At the same time, many women who experience abortion express that it is against their religious belief. This clearly indicates a discrepancy between religion and reality, and a question arises as to how abortion is morally and religiously justified by women who experience an unintended pregnancy.

This paper aims to compare perspectives of religious leaders (*Grand Ayatollahs*) and women who have experienced abortion. The data is based on a qualitative study conducted in Qom, Iran. Qom is considered to be a holy city in Shi'a Islam and is home to Iran's largest seminary (*Hawzahs*), competing only with Najaf in Iraq, where Shi'a jurisprudence (*fighh-e Shi'a*) is taught. Thus, Qom stands out as a unique place for comparing women's views with religious leaders' perspectives on abortion. Using in-depth interviews, information was sought on reasons and consequences of abortion from 25 women aged 15-49 who had experiences of abortion. In addition, around twenty in-depth interviews were conducted with religious leaders who are teaching theology in Seminaries in Qom.

Our results show that social problems followed by economic pressures have been the two main reasons for abortion. This is indicative of the rise of economic aspirations among couples in the society. Religious leaders oppose abortion based on sayings from *Imams* as well as the high value of protecting human life from the Islamic perspective. The results also show that none of the women interviewed were eligible by law to abort their unwanted pregnancy. However, half of them could have been legitimized to abort their fetus based on religious leaders' perspectives. These include pregnancies that could be harmful to mothers (i.e. pregnancies occurred at a very young or a very old age), pregnancies that occurred to a temporary (or hidden) marriage, or pregnancy during engagement (between engagement and wedding) that are socially forbidden and result in dishonoring the family. Some of the religious leaders indicated that such terminations could be supported.

Most respondents were aware that abortion is religiously forbidden (*haram*) and sinful but practiced abortion due to social or economic pressures, and sometimes due to medical reasons. As disobeying a religious rule can be compensated by repentance, paying blood-money (*diah*), or atonement (*kaffareh*), while consequences of having an unwanted birth will be there during one's lifetime, women make their decision to disobey religious rules and abort their unplanned pregnancy within such a conflicting situation.

Risk Factors of Unplanned Pregnancy Among Women: Comparison Between Bangladesh and West Bengal

Tapan Kumar¹ Roy and K. K. Singh²

¹Department of Population Science and Human Resource Development, Rajshahi University, Bangladesh

²Department of Statistics, Benaras Hindu University, Varanasi, India

Email address: roy.tapan@gmail.com

Unplanned pregnancy in developing countries is a serious health concern which affects the reproductive health of a woman, and thus needs to be addressed. This is a fundamental indicator of the state of women's reproductive health and of the degree of autonomy women have in determining whether and when to bear children. In this study, an attempt has been made to identify the factors affecting unplanned pregnancy (unwanted and mistimed pregnancy) in Bangladesh and West Bengal utilizing data from Bangladesh Demographic and Health Survey 2007 and National Family Health Survey 2005-06. Bivariate and multivariate analyses were conducted using a sub-sample of women whose most recent pregnancy occurred in the five years preceding the survey. In bivariate analysis, the chi-square test of independence was implemented. For multivariate analysis, the multinomial logistic regression was determined to be the most appropriate method to assess the factors associated with unwanted and mistimed pregnancy. The results show that one-third (33%) of the recent pregnancies were unintended in Bangladesh compared to 27% in West Bengal. Multivariate analysis indicated that among the socio-economic and demographic indicators assessed, significant predictors of unwanted pregnancy compared to planned pregnancy in Bangladesh, were age of woman, education, parity, use of modern contraceptive method, age at marriage, consonance of fertility and residence. In West Bengal, however, the significant predictors of unwanted pregnancy were age of woman, parity, socioeconomic status, use of modern contraceptive method and age at marriage. In case of mistimed pregnancy compared to planned pregnancy, the important predictors in Bangladesh were age of woman, education, parity, use of modern contraceptive method, age at marriage, consonance of fertility and residence but in West Bengal, all the above variables were significant except residence and education. Interestingly, findings show that education, residence and socioeconomic status play an important role in unplanned pregnancy in Bangladesh but not in West Bengal. This study will help policy makers to address reproductive health services to those women who have been identified in this study as being at increased risk for unplanned pregnancy in Bangladesh and West Bengal, especially those of higher parity, older women and poor, vulnerable rural women.

Socio-cultural Aspects of Abortion in Iran

Meimanat Hosseini-Chavoshi¹, Mohammad Jalal Abbasi-Shavazi² and Peter McDonald³

^{1,3} Australian Demographic and Social Research Institute, Australian National University, Canberra, Australia; ² University of Tehran, Iran

Email address: meimanat.hosseini@anu.edu.au

Iran experienced a rapid fertility decline in recent decades and small family size has become a norm among Iranian couples. The reproductive lifespan has shortened and Iranian women now complete their desired number of children at an age that is many years below the age when it is generally acceptable for them to have a sterilization operation. Given that abortion is illegal in Iran, women are faced with many social and cultural issues preventing them from resolving an unintended pregnancy. Reviewing abortion related policies and laws in Iran, this paper points out the social disapprobation attached to abortion. The associated stigma may help to explain the unnaturally low proportions of abortion reported in the 2000 IDHS and the 2005 Iran Low Fertility Survey (ILFS). Preliminary results show that around 33% of pregnancies in Iran are unintended but only around two percent are said to have been terminated through induced abortion. The qualitative study funded by Wellcome Trust carried out in the city of Rasht in Gilan province was designed to investigate the socio-cultural aspects of induced abortion in order to understand the decision making process of women considering termination of an unintended pregnancy.

Results show that women have adopted a small family size norm, and that economic concerns are among the main reasons for pregnancy termination. Social and family networks influence women's decision making regarding the choice and the procedure of abortion. While women have some religious concerns as a barrier for induced abortion, their education is an important determinant of the decision on whether to abort an unwanted pregnancy or not. Their feelings of guilt have many implications for social, physical and psychological health. Policy makers should take these issues into account as they design culturally sensitive policies dealing with abortion.

Post Abortion Family Planning: A Neglected Public Health Domain

Sushanta K Banerjee¹ and Vinoj Manning²

Ipas, New Delhi, India

Email address: ¹banerjees@ipas.org

Post-abortion family planning is defined as the provision of contraceptive counseling and services to help women prevent an unwanted pregnancy. Researches recommend that ovulation may occur as soon as two weeks after an abortion, in comparison to one month after childbirth. Also, women with induced abortion are at high risk of repeat abortions, and an interval of less than six months between an abortion (induced as well as spontaneous) and a subsequent pregnancy is significantly associated with adverse pregnancy outcome. Despite this, women undergoing abortion do not always receive immediate post abortion family planning services. Unfortunately, research efforts are limited to examine the associated reasons behind this low prevalence of post abortion family planning. This is more pronounced in a country like India, where a major share of the abortions is being conducted by illegal or untrained providers. Against this backdrop, this study tries to assess the current prevalence and quality of post abortion family planning (PAFP) services and supplies at different levels of health facilities (ranging from district hospitals to private legal and illegal providers) and operational or attitudinal barriers of providers/clients to provide/accept PAFP counseling and services.

The study was conducted in five selected cities of Uttar Pradesh, India. A mix of qualitative and quantitative research techniques was applied. The quantitative approach captured abortion and post abortion care related data of women who received abortion services during the three months preceding the survey. While the qualitative research adopted the in-depth interviewing technique that involves conducting intensive individual interviews of providers (medical doctors, nurses, illegal abortion providers, and chemists and clients who received abortion services. Respondents were selected from approved public and private health facilities as well as informal health facilities legally not allowed to provide abortion services.

The salient findings are: Post abortion contraceptive counseling and services are acceptable and feasible in urban Uttar Pradesh; NGO clinics and district hospitals already have shown a pathway. An overwhelming majority of abortions occur in the private and informal sector where PAFP is currently almost nonexistent; there is no uniformity across the health facilities in terms of providing PAFP services. Providers are not conscious of the need to offer PAFP in case of spontaneous and incomplete abortions. The attitude and lack of technical clarity of the providers which uniformly restricted improving the prevalence of PAFP are apathy to provide PAFP, linking sterilization/ IUCD (coercion) with free abortion services, provider bias and misconception to choose a method after abortion, perceived low revenue through family services in the private sector, women are more likely to accept a post-abortion contraceptive method if services are provided immediately after clinical services, counseling and services are provided in the same room or on the same ward where clinical services are provided, and a larger range of methods is offered. Thus, choice of contraception immediately after abortion was found to be provider driven primarily by provider concerns and possible misunderstanding of post abortion complications and infection.

Unsuccessful prior drug use among women seeking first trimester abortion at registered facilities in Bihar and Jharkhand, India

Rajesh Kumar, A J Francis Xavier and Shveta Kalyanwala

Population Council, New Delhi, India

Email address: rkumar@popcouncil.org

Although abortion has been legal in India since 1971 and mifepristone approved for early pregnancy termination since 2002, many abortions take place outside registered facilities and are conducted by uncertified providers. Many women attempt to induce abortion on their own, accessing oral medication/preparations from a chemist or other provider, and presenting at registered facilities when these attempts fail. While there is considerable anecdotal evidence that women attempt to induce their own abortion using ayurvedic, homeopathic and allopathic preparations including mifepristone and misoprostol obtained from chemists without a prescription, little is known about those whose efforts to do so fail: the medication/preparations they use, their socio-demographic profile, or delays in successful pregnancy termination. The objective of this paper is to shed light on these issues.

Data came from a study conducted during May 2008 to May 2010 on the feasibility of provision of abortion by non-physicians in clinical settings of Bihar and Jharkhand. During this period, 3394 women with a GA of ≤ 56 days presented themselves at the facility for undergoing a termination of pregnancy. Of these abortion seekers, more than one quarter (N=1065) had made unsuccessful previous attempts to induce abortion, prior to presenting themselves in the facility by using a range of oral medication/preparations, available over the counter in medical shops such as mifepristone and/or misoprostol (29%), ayurvedic (22%) and homoeopathic (13%) drugs most of which are contraindicated for use in pregnancy and largely ineffective; oral and emergency contraceptives (14%) and unspecified oral medication (23%).

Multivariate analysis was conducted to explore the extent to which socio-demographic factors were associated with whether or not women had made unsuccessful prior attempts to induce abortion, using oral medications.

Findings suggest that neither age, marital status, gravidity nor previous experience of induced abortion were significantly associated with prior drug use. However, logistic regression analysis suggests that, after controlling for age, marital status and previous experience of induced abortion, women with some education –1-7 years and 8-11 years were significantly more likely than uneducated women and those who had completed higher secondary school (Class 12) to have made such attempts (odds ratios of 1.55 and 1.74, respectively). Notably, women who had attempted abortion previously appeared at an abortion facility somewhat and significantly later in their pregnancy than other women (odds ratio 1.01).

Findings further suggest that although women report attempting to abort an unwanted pregnancy by using oral medication/preparations, they remain poorly informed about spurious versus authentic oral preparations, about restrictions on over-the-counter use of mifepristone-misoprostol in the present socio-legal scenario, and about the correct use of the mifepristone-misoprostol combination. Findings clearly suggest that many abortion-seekers (or their family members) approach chemists and uncertified providers (of Indian systems of medicine for example) as a first step in attempting to induce abortion; such findings highlight the need to fully inform chemists and providers about oral medications, their dosage, effectiveness and so on.

Factors influencing choice of medical abortion among women in Nepal

Anand Tamang, Shareen Tuladhar, Jyotsna Tamang and Bishnu Dulal
Center for Research on Environment Health and Population Activities (CREHPA), Kathmandu, Nepal
Email address: anand@crehpa.wlink.com.np

Medical abortion (a combination of mifepristone and misoprostol) was introduced in Nepal in 2009 to provide an alternative safe abortion option for Nepalese women. The government's pilot medical abortion programme showed that the availability of free medical abortion services did not lead to an increase in use of medical abortion among women. This paper assesses the factors that influenced clients' choice of medical abortion when both surgical and medical abortion options were offered.

Individual structured exit interviews were carried out among 1,041 abortion clients with a gestational age of ≤ 63 days at seven abortion clinics located in three districts of Nepal. Of these clients, 499 chose medical abortion (MA) and the remaining 542 chose the surgical option (manual vacuum aspiration). Clients who chose MA were interviewed when they returned to the facility for a follow-up visit whereas clients who chose manual vacuum aspiration (MVA) were interviewed on the day of the procedure. Due to the high number of clients opting for MVA, every third or every fourth MVA client was interviewed. Interviews were carried out between January 17 and May 16, 2010.

Results show that the majority of the clients (59%) who were aware of both MVA and MA procedures prior to attending an abortion clinic chose MA. In contrast, almost three-fourths of the clients (71%) with no prior knowledge of both methods chose MVA. A very high percentage of clients accepted MA (89%) if they were told about the advantages and disadvantages of MA by the provider at the abortion clinic. Moreover, 29% of the clients who reported having already chosen to undergo MVA before coming to the clinic changed their minds and chose MA after being counseled. On the other hand, few clients (10%) who reported having chosen MA before coming to the clinic switched to MVA after counseling. Among the clients who had not pre-determined their method of choice, majority (56%) chose MA after obtaining sufficient information on abortion procedures. Respondents' age, pregnancy history and previous abortion history were not statistically significantly associated with method choice. However, ethnicity, place of residence, and education level were statistically significant. *Janajatis* women were less likely to accept MA than MVA compared to upper caste women. Women's education and urban residence was positively correlated with MA use.

We conclude that in view of the fact that medical abortion is a relatively new method in Nepal, women were more likely to opt for this method if they received adequate information about MA. Counseling was a very important factor in women's decision to choose MA even for those women who had chosen to have a surgical abortion before coming to the clinic. Ethnicity, place of residence, education and occupation were statistically significantly associated with the choice of MA.

Labor Force and Employment in Bangladesh

Barkat-e-Khuda

Department of Economics, Bureau of Economic Research,
Dhaka University, Dhaka, Bangladesh
Email address: barkatek@yahoo.com

In a poor 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 in: (i) labor force growth and participation rate; (ii) employment in major occupations and industries; (iii) employment status categories; and (iv) unemployment and underemployment in Bangladesh.

The paper is primarily based on data from the 1999-2000, 2002-03 and 2005-06 Bangladesh Labour Force Surveys and other documents.

Findings indicate that Bangladesh is predominantly an agricultural country. Its share of the GDP has been gradually declining over time and currently accounts for less than one-fifth of the GDP. The share of the manufacturing sector (whose growth is dominated by ready-made garments) to the GDP increased from 15% in 1999-2000 to only about 18% in 2007-08.. The share of the services sector to the GDP increased from 42% to about 45% during the same period, with trading, transport and communication, and construction, accounting for the bulk of the contribution.

Between 2000 and 2006, the total working age population increased from 74 million to 85 million, and the total labor force from 41 million to about 50 million. The annual labor force growth rate of over 2% is greater than the annual population growth rate of around 1.4%. The labor force participation rate increased from 55% to about 59%, the increase being greater among females and in rural areas. Total employment increased from 39 million to over 47 million, i.e. by 8 million (males: 5 million; females: 3 million). Female employment is largely poverty-driven. Most of the increase in employment is in the low-productivity, low-wage, informal sector due to the relatively limited number of formal sector jobs. Only one-fifth of the total labor force is employed in the formal sector, with its share twice as high in urban than rural areas and higher among males than females.

Findings further reveal no marked change in the occupational and industrial structures of the employed population. Agriculture, forestry and fisheries were the primary occupations and the primary industry of about half of the employed population, followed by production and transport workers, sales workers, service workers, professionals, and clerical workers. 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. This type of change cannot be expected to contribute much to translating the benefits of growth into poverty reduction. Without major expansion in the manufacturing sector, most people will continue to be employed in low-productivity, low-wage informal sector jobs. Hence, the desired level of economic growth will not be achieved.

Moreover, there has been no overall change in the relative shares of different employment status categories. With the self-employed as the major employment status category among males and unpaid family workers among females, the labor force continues to be largely employed in family-operated, small-size units. The unemployment rate is low (4%). But, of greater concern is that there is considerable under-employment (17%-34%), higher among females and in rural areas.

To sum up, therefore, Bangladesh should give top priority to higher and more employment intensive economic growth by adopting a number of strategies: (i) expansion of large scale manufacturing industries; (ii) rapid growth of small and medium enterprises, especially in small towns; (iii) widening micro credit based and targeted employment generation programmes, especially for the poor in both rural and urban areas; (iv) continuation and further strengthening of social safety net programmes to provide employment during lean seasons and at times of natural disasters; (v) providing credit and training for self-employment; and (vi) vigorously tapping overseas employment opportunities. The government's revised PRSP 2009-11 has given due emphasis to the above strategies; however, it remains to be seen to what extent those strategies are being vigorously pursued.

Employment Growth, Knowledge Intensity and Higher Education in India

Jeemol Unni

Economics, Institute of Rural Management, Anand (IRMA), Gujarat

Email address: jeemolunni@yahoo.co.in

India has seen a rapid growth in knowledge intensive industries. At the same time there appears to be a major surge in the demand for higher education, both technical and non-technical. There is now an understanding among the youth that unless they acquire relevant skills, they will not be able to gain from the current growth of knowledge and technology intensive industries. This is a challenge for India today, to match the education/skills and relevant jobs for its youth.

In this paper we will analyze the links between changes in higher education and occupational structure through a new classification method developed in the UK (Elais and Purcell, 2004a). These changes are analyzed by comparing among the age cohorts 21-35 years and 40-54 years for the year 2004-05 and between 1993-94 and 2004-05 (NSSO data). We address two questions: How has the demand for higher education changed in various occupations over a decade? And to what extent technology and knowledge intensive industries absorbed workers in occupations requiring higher education? More specifically, we study the links between high technology manufacturing and knowledge intensive service industries with graduate occupations.

The paper begins with a broad review of the context and policy options in higher education in India. The second section discusses the supply of graduates through enrollments among adult cohorts and occupied population. In the third section we construct the new Standard Occupational Classification SOC(HE), and use it to analyze which occupations have a greater graduate density and whether there is an increase in demand for higher education. In the final section, we discuss whether high growth knowledge intensive industries also absorb a higher proportion of 'graduate' occupations.

Contested Urban Spaces: A Study of Street Vendors in the City of Hyderabad

Nisha Bharti

International Institute for Population Studies, Mumbai, India

Email address: nisha.bharti0711@gmail.com

Whose city is this? That is the question which everyone residing and working in a city asks, sometimes silently and sometimes loudly. The rich have a conception of a city which should appeal to one's aesthetic sense; it should be endowed with modern civic amenities, wide and congestion-free roads, full of parks, malls, etc. The poor have a conception of a city which is willing to share economic and social opportunities generated by it, a city which welcomes the poor and the socially outcast, migrating from rural areas to build a new future in the city. Large numbers of poor and socially outcast migrants come to cities in search of occupation and because of their lack of skills and educational qualifications, they are absorbed in the unorganised sector. Street vending is one of the occupations in the informal sector and comprises 2% of the population of any state.

The street vendors of Hyderabad city are the subjects of this study. The study provides an opportunity to assess the progress made so far in the implementation of the National Policy on Urban Street Vendors. It also gives an opportunity to develop a critical understanding of urban governance, particularly the planning process, in relation to street vendors. However, street vending has to be understood in the wider context of urban governance, informal economy, and the struggle for a fair share of the urban space and wealth by the urban poor and their associations. Street vendors are part of the context of growing informalization of the workforce which has further intensified with the liberalisation and globalisation process. Thus, the study of street vendors cuts across both urbanization and informal labour issues.

The objectives of the study were: (1) to analyse and explain characteristics of urban governance in relation to street vendors in the city of Hyderabad; (2) to assess the extent of implementation of the National Policy on Urban Street Vendors in Hyderabad, and (3) to understand the social and economic aspects of the profession of street vending in Hyderabad and the problems faced by street vendors. This study was primarily empirical in nature. It combined two methods: interaction with the subjects of the study and observation of facts on the street

The larger question with which we started – Whose city is this? – still stares the street vendors in the face despite five years of existence of the National Policy. The National Policy has not brought any significant succour to them. This also calls for a clear understanding of the issues of street vendors. The analytical framework of urban equity and inclusive urbanization can put their struggle in the right framework. Street vending has to be understood in the wider context of urban governance, informal economy and the struggle for a fair share of urban space and wealth by the urban poor and their associations.

**Labor Productivity and Standard of Living in an Ageing Society:
An Empirical Evidence of Five ASEAN Countries**

Supachet Chansarn

Bangkok University, Thailand

Email address: supachet.c@bu.ac.th

This study measured labor productivity growth and the improvement of standard of living, as measured by the growth rate of real GDP per capita of Indonesia, Malaysia, the Philippines, Singapore and Thailand, during 1971–2005. It also examined the influences of labor productivity growth and working-age population growth on improvements in standard of living in order to identify the contribution of labor productivity growth in offsetting the impact of population ageing on the improvement of standard of living. Findings revealed that during 1971–2005, Singapore had the highest average growth rate of labor productivity, followed by Thailand, Malaysia and Indonesia, respectively, whereas the Philippines had the lowest growth rate. Singapore also had the highest average growth rate of real GDP per capita, followed by Thailand, Malaysia and Indonesia, respectively, while the Philippines still had the lowest one. Moreover, the findings revealed that both the growth rate of labor productivity and the growth rate of working-age population had a positive influence on the growth rate of real GDP per capita. Eventually, a one percent decrease in the growth rate of the working-age population must be compensated by 1.932, 2.160, 5.913, 2.411 and 1.492 percent increase in the growth rate of labor productivity for Indonesia, Malaysia, the Philippines, Singapore and Thailand, respectively, so that they can have constant real GDP per capita growth, implying a better standard of living for the people of their countries.

The Long View of Ageing in Four Diverse Muslim Countries: A Comparative Approach

Nader Motie Haghshenas¹, Amir-Houshang Mehryar², and Akbar Aghajanian³

^{1,2}Population Studies and Research Center in Asia and the Pacific, Tehran, Iran;

³Fayetteville State University, USA

E-mail address: ¹haghshenas@psrc.ac.ir

It is well known that the twentieth century has witnessed remarkable demographic transformations. Population ageing is a growing challenge throughout the world. Underlying global population ageing is a process known as demographic transition in which mortality and then fertility declines from higher to lower levels. Decreasing fertility along with lengthening life expectancy has reshaped the age structure of the population in most regions of the planet by shifting the relative weight from younger to older groups. The role of international migration in changing age distribution has been far less impotent than that of fertility and mortality. In 2000, approximately 10 percent of the world's people were 60 years old or older. According to the United Nations Medium Variant population projection, falling fertility and mortality rates will cause this figure to rise to over 20 percent by 2050. With the extension of the life span, more and more people reach an age when they cannot or can barely take care of themselves. The primary aim of this study is to explore the process and dynamics of age structural transition (AST) and ageing in Iran, Pakistan, Turkey and Egypt between 1950 and 2050. More specifically, the study is designed to answer the questions: (1) Do countries with different historical experiences, political ideology and economic growth manifest similar patterns of demographic change? (2) Is the prospect of rapid ageing equally apparent in these Muslim countries? (3) What are the common determinants of rapid ageing in these countries? Data used in this paper consist of the data sheet for World Population Ageing for 1950-2050 issued by the UN Population Division in 2005. Results revealed that the ageing index for all four countries is projected to rise in the next half century. Variation in ageing index for Turkey (117.9) in 2050 is relatively higher than in other countries and significantly higher than in Pakistan (53.8). The increasing number of people going through their most active and productive period of life will present a unique opportunity for growth, savings and investment. If this opportunity is taken seriously and made good use of, Iran, Turkey, Pakistan and Egypt will be in a much better position to respond to the enormous challenges that will be posed by the large number of elderly that will have to be taken care of in the final decade of the study period.

Demographic Situation of Population Ageing in Bangladesh

¹S M Shariful Islam, S M Abul Kalam and Hurun Nessa

¹Ministry of Health and Family Welfare, Dhaka, Bangladesh

E-mail address: drsislam@gmail.com

The unprecedented demographic change of population ageing has transformed many societies in the Asia-Pacific region, including Bangladesh, a highly densely populated country of 150 million. In recent years, Bangladesh has achieved considerable success in fertility reduction and gradual improvement in mortality, morbidity, human capital, and the economy, but strategic policies regarding population ageing remain a challenge. There is a steady increase in the proportion of the aged population which is expected to continue to grow. This study uses data collected from a national representative primary source and provides some important findings. The majority of older people live in rural areas where services, health care provision and access to clean water are more precarious. Older people in Bangladesh experience poverty, food insecurity and require targeted assistance. The impact of annual cyclones, floods and over population contributes to widespread poverty affecting all ages. Bangladesh ranks 140 out of 177 countries in UNDP's 2007-2008 Human Development Index, and an estimate indicates that 36% of the population lives on US\$1 a day. While a significant proportion of this percentage is thought to comprise older people, their needs compete with the demands of other vulnerable groups supported by stronger advocacy initiatives. Despite recent socio-economic changes, older people prefer to live with their extended families. In turn, they also support families, both financially and voluntarily. In 2006, Bangladesh produced a National Policy on Older People, leading to targeted funding and plans. The study also reveals that the traditional support system is gradually shifting downwards in Bangladesh and older people are seeking alternative financial and health care support from the government. Research is needed to understand the reality of older people, their well-being and security. It is essential for the society and the government to realize that the aged population need not be regarded as 'demographic refuse' and given a congenial atmosphere; they can still contribute fruitfully to the family and community.

The emerging ageing scenario in India
S. Irudaya Rajan
Email address: rajancds@gmail.com

The world is witnessing a scenario of rapidly changing demographic conditions, predominantly in the developing countries. The resulting slowdown in the growth of the number of children per couple along with the steady increase in the number of elderly persons has a direct bearing on both inter-generational and intra-generational equity and solidarity, which constitute the basic foundations of human society. Population ageing results mainly from reductions of fertility, a phenomenon that has become virtually universal. Since 1950, the proportion of old persons in the total population has been raising steadily, from 8 per cent in 1950 to 11 per cent in 2007, and it is estimated to reach 22 per cent in 2050. Ageing will also have an impact on economic growth, via savings, investment, consumption, labour markets behavior, pensions, taxation and intergenerational transfers. In the social sphere, this phenomenon influences family composition and living arrangements, demand for housing and migration, and the need for health-care services. On the political front, population ageing may shape voting patterns and political representation. The recent emphasis on studies on elderly persons in the developing world is attributed to their increasing numbers and deteriorating living conditions in the later years of life. While increasing numbers are attributed to demographic transition, deteriorating social and economic conditions are a result of the fast-eroding traditional family system in the wake of rapid modernization, internal and international migration and urbanization. India accommodates 77 million elderly persons, a figure second only to the number of the elderly in China, according to the 2001 census. Economic, social and health aspects of this fast-growing segment of the population pose a great challenge to all socio-economic sectors in India. In this context, this paper overviews the trends in ageing in the past and project the emerging scenario for the next 100 years, using the 2001 age structure and the available trends in fertility, mortality and migration rates.

Ultra-low Fertility in Shanghai: A Future Scenario for other Populations?

Stuart Basten¹, Wolfgang Lutz² and Qiang Ren³

^{1,2}International Institute for Applied Systems Analysis, Vienna, Austria,

³Peking University, China

E-mail address: ¹basten@iiasa.ac.at

"I don't want a second child. One is enough, and I hope it is a girl. It is very nice to be the only child; you don't need to share or grab things from others. You can have all your parents' attention. My parents have brothers and sisters, but when my grandparents died they quarrelled over the legacy. That was horrible and hurtful. Being the only child, you won't have those problems." (Yu Nan, expectant mother, Shanghai, aged 25). In recently reporting a TFR of just 0.67, Shanghai can be said to display the world's lowest fertility rate of any sizeable population. The consequences of this for the ageing of the city's population are, of course, significant. In 2000, the proportion of young people in Shanghai (aged 0 - 14) was 12.19%, the lowest in China. In 2009, meanwhile, it was reported that 21.6% of the city's population was aged over 60. The Shanghai Population and Family Planning Committee estimates that by 2020, the percentage of the elderly being 60 and above will reach 33.7% and that of the elderly being 65 and above will be 28.1%. As with Hong Kong, migration has been suggested as an immediately viable way to alleviate the situation. This policy has not, however, been without its difficulties. Shanghai has previously made local efforts to alter the existing, nationally imposed One-child Policy. For example, the amended Shanghai Population and Family Planning Rule (April 2004) identified nine types of urban couples and 12 types of rural couples who might be eligible for a second child. These include couples where both spouses are from a one-child family, or in certain divorce cases. However, the potential impact of this policy amendment is questionable. For example, the number of births of second children following the 2004 amendment barely rose from 2,910 in 2005 to 3,934 in 2007. Research conducted by both the Shanghai Population and Family Planning Committee and researchers at Yale suggests that the One-child Policy has been accepted and internalized (Nie and Wyman 2005; Wenjun 2009), with a 2008 survey of 3,425 young and middle-aged white-collar couples' parenthood plans finding that many young eligible couples don't want to have two children, with an average intended family size of just 1.6 (Wenjun 2009). The reason for this appears to be that, with Shanghai families with one child accounting for 97% of the city's population, this familial situation has become normalized and socialized. In this paper, we introduce our preliminary findings about fertility and policy in Shanghai and make some suggestions for the future of fertility in the city. Is it possible that the conditions that lead to such ultra-low fertility levels will emerge in other low fertility settings around the world, and if so, under what conditions would that be likely to happen?

Is Korea in a Low Fertility Trap?

Jin Ho Choi

Ajou University, Seoul, South Korea

e-mail address: jhchoi@ajou.ac.kr

Korea is one of the countries which has experienced fast fertility reduction in a relatively short period of time, and shows a 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 increased slightly to 1.20. The main purpose of this paper is to examine whether Korea is in a 'Low Fertility Trap'. In recent years, Lutz and others proposed a low fertility trap hypothesis. They argued that once fertility has fallen below a certain level and stayed there for a certain time, it might be very difficult to reverse such a regime change. They identified three possible self-reinforcing mechanisms that could lead to such a situation. The first one is a demographic mechanism representing absolute number of births in a given year as a function of the level of period fertility, and the age structure of the population. The second mechanism is based on sociological reasoning. It is structured around the concept of personal ideal family size which might determine actual cohort fertility. The third one is based on an economic rationale referring to the gap between personal aspirations for consumption and expected income. The main sources of data for the analysis come from the 2005 Population Census and 2009 Special Survey for Marriage and Child-bearing. The analysis found that the number of females of reproductive ages 20-39 has consistently declined since 1996. The ideal number of children has remained above 2.0 regardless of age groups, till 2006. But in recent years, for young females, it has dropped to below 2.0. The paper will deal with the relative economic conditions for the young generation. Based on the results of the above analysis the paper will finally conclude with whether Korea is in a low fertility trap, and also give some policy implications.

Emergence of One-child Family Norm in India

Mamta Kumari¹ and Sulabha Parasuraman

International Institute for Population Sciences (IIPS), Mumbai

E-mail address: ¹ kmmamta.manu@gmail.com

Fertility at or below replacement level now prevails in 64 countries with populations totaling 44% of the world population. In India, the recent National Family Health Survey (NFHS) shows that 12 out of the 29 states namely, Himachal Pradesh (1.9), Punjab (1.9), Delhi (2.1), Sikkim (2.0), West Bengal (2.1), Tripura (2.1), Maharashtra (2.1), Andhra Pradesh (1.8), Karnataka (2.1), Goa (1.8), Kerala (1.9) and Tamil Nadu (1.8) have achieved replacement level or below replacement level fertility. Even in those states which have not reached replacement level fertility, fertility in urban areas of these states is below replacement level. The decline in fertility is accompanied by a desire for small families. Fertility below 2 children implies that at least a few couples are opting for a one-child family. In NFHS-1, the ideal number of children of ever married women aged 15-49 was closer to 3 children, which has now reduced to 2.4 in NFHS-3.

Using the third round of NFHS (2005-06) data, this study analyzes the prevalence of the one-child family norm among women and men across different demographic and socio-economic groups in India and selected states. The NFHS-3 collected information on ideal family size, desire for children and use of family planning methods. The proportion of women and men who reported their ideal family size as one child were computed with the help of three dichotomous indicators namely, percentage of non-pregnant (pregnant) currently married women who have one surviving child (no surviving child) and want no more children, percentage of currently married women with one surviving child, who do not want more children and are using any family planning method, and percentage of currently married women with one surviving child, and who are sterilized.

Findings show that currently, at the national level, the percentage of one-child families is small; only about 3% are one-child families, and of these, two-thirds are one-son families. Findings further show that the phenomenon of one-child families is concentrated in a few states with fertility at or below replacement level. The prevalence of one-child families is higher in Himachal Pradesh and states in eastern India: West Bengal, Tripura, and Sikkim. One-child families are more prevalent in certain socio-economic groups such as those from urban areas, with high education and from rich households. Moreover, a large proportion of never married women and men who are mostly young (below age 30), desire a small family with only one child, and most of them are not particular about the sex of the child, that is, son preference is not strong among those aspiring for a one-child family. The high correlation between the one-child family norm and one-child families also implies that once the never married women/men marry and enter the childbearing group, we may probably find a sizeable number of one-child families.

Fertility Prospects in China

Baochang Gu¹ and Yong Cai²

¹Center for Population and Development Studies, Renmin University of China;

²University of North Carolina, Chapel Hill, USA

Email address: baochanggu@gmail.com

The most recent revision of World Population Prospects (United Nations 2009) revised China's current level (for 2005-2010) of total fertility rate (TFR) to 1.77, from 1.73 reported in the 2006 Revision. This new number is "based on official estimates of total fertility through 1990. Official estimates for 1991-2007 were also considered." However, the so-called "official estimates", presumably provided by the National Population and Family Planning Commission of China (NPFPC, formerly State Family Planning Commission, SFPC), is substantially higher than the estimates provided by the National Bureau of Statistics (NBS) of China, as well as estimates from independent scholars and other international organizations such as the US Census Bureau and Population Reference Bureau. There is no need to emphasize the importance of presenting accurate and most up-to-date assessment of China's fertility level, because misguided estimates will not only paint a distorted picture of China's demographic future, but also present a misleading global population prospect. In this paper, we start with a systematic review of the fertility trend in China since the 1990s, which has experienced a fundamental decline, with its current level of TFR at about 1.5. We then move on to explain the reasons behind this decline, both from a socio-demographic perspective and from a technical standpoint. We finally conclude the paper by discussing the implications of China's low fertility for China and the world.

Study on Medical Expenditure burden of Older People in China

Ping Yan

Institute of Population Research, Beijing, Beijing Administrative College, Beijing, P.R. China

Email address: flyyanping@yahoo.com.cn

With the largest population in the world, China today, faces the challenges of an ageing population, especially in the field of health and health care. The status of medical expenditure of the elderly does not seem to offer much hope. This paper discusses the level of medical expenditure of older people by selected socio-economic characteristics, the compensation ratio and inequalities in medical expenditure, and the factors influencing medical expenditure.

Findings show a negative relationship between medical expenditure and frequencies of older people which means the lower the level of medical expenditure, the larger their numbers, but a positive relationship with their within-group mean medical expenditure, which means the higher the level of medical expenditure, the higher the mean medical expenditure within the group. In 2006, the medical expenditure of older people accounted for 75% of the family's total medical expenditure and 0.1% of the total family income. When analyzed by age, in 2000, percent medical expenditure to total medical expenditure as well as mean medical expenditure of persons aged 65-69 was the highest, indicating a decrease in mean medical expenditure with increasing age. In 2006, these indicators were highest for the 70-74 and 80+ age groups, respectively, indicating an increase in the burden of medical expenditure with age. Differences in relative and mean levels of medical expenditure by gender and area of residence were evident: elderly males generally reported higher levels than elderly females, and although expenditure levels had risen in both urban and rural areas over the six-year period (2000-2006), the urban older males spent much more on medical services than rural older males. The burden of medical expenditure also increased with a rise in education and income levels. Gender and urban-rural differences were also evident with regard to the compensation ratio of medical expenditure; older males and all urban older people had higher compensation ratios than elderly females and the rural older people, respectively. Compensation ratio also increased with age, as well as with education and income level.

Findings further revealed that the main combination methods of payment used by the elderly are "Self Paid", "Paid by offspring and relatives", and "Public medical care" combined with "Self Paid"; Compared to 2000, in 2006, less people chose only one paying method, more people chose two combined paying methods, less people chose only "Self Paid" or only "Paid by offspring and relatives", more older people chose "Public medical care" combined with "Self Paid". Public medical care greatly affected the method of payment of older people. This means and the payment source of older people is becoming more plural and rational, and though their burden of personal medical expenditure has decreased by 13.6% during the six-year period, it continues to be serious. Results on the inequality of the medical expenditure using Range, Gini coefficient and Index of Dissimilarity showed obvious differences by age, gender, area, education and income level; The Gini coefficient was over 0.4 for all four factors indicating large inequalities. Inequalities increased over the six-year period between surveys except when analyzed by area of residence and income level. In both 2000 and 2006, "annual income" and "annual times of seeing a doctor" had a significant positive effect on medical expenditure of older people while the area of residence had a negative effect. A comparison of factors affecting medical expenditure showed that the difference in medical expenditure between

2000 and 2006 had increased though the influencing factors seemed to have become more reasonable.

Four main policy implications follow from the study: First, health education should be reinforced to improve awareness of good health practices. Second, the social function of the government should be strengthened; the multiple level medical security system should continue to be perfect. Third, community health services should be promoted and a new health service system set up for older people. Finally, the cooperation of international institutions should be strengthened; these institutions should help low or middle level income countries to improve health equality and provide a platform for communication between researchers from different countries.

Ageing, Disabilities and Role of Adult Children in Rural Bangladesh

Ali Ashraf, Tracey Koehlmoos and Shubash Ch. Das

ICDDRDB: International Centre for Diarrhoeal Diseases Research, Dhaka, Bangladesh

Email address: nashraf@icddr.org

Ageing parents face a double burden — of loneliness, deprivation from social interactions, reduced or no access to cash resources and household decision making role along with non-communicable diseases (NCD). The consequences of disabilities resulting from stroke bring immense mental suffering to its survivors in performing their daily activities of living, and impose financial and mental burden on their adult children, and cause mortality.

The objective of this paper is to assess the role of adult children in supporting the daily activities of living of people with disabilities in rural Bangladesh.

The Health and Demographic Surveillance System (HDSS), administered by the International Centre for Diarrhoeal Disease, Bangladesh, generates health care utilization for any reported medical problem within the past two weeks along with demographic events in Abhoynagar sub district and Mirsarai. The reported disabilities from October 2006 December 2009 were coded following the disease category used to determine causes of death in the tenth version of the International Classification of Diseases (ICD-10). Case studies on the role of adult children in daily activities of living of their ageing parents with disabilities have been used.

Findings showed that the calculated rate of stroke/paralysis among people 25 years of age or more in Abhoynagar was 16/1,000 and 21/1,000 population in Mirsarai. Overall, the proportion of men was higher and people in the 45-54 and 55-64 age groups and over 65 years of age were more vulnerable in both HDSS sites. The case fatality ratio of stroke/paralysis was 11.6 in Abhoynagar and 15.6 in Mirsarai. The proportion of deaths was higher among males (60%) in Abhoynagar and higher among females (61%) in Mirsarai, and this pattern was similar across all age groups in both the HDSS sites. The reason for the higher proportion of deaths among men in Abhoynagar and case fatality ratio of stroke/paralysis and deaths among females in Mirsarai requires more investigation. The first reported and recorded event of stroke/paralysis in the past two weeks in the HDSS database showed that only 9% people did not consult any practitioner, 45% consulted an unqualified practitioner and 46% consulted a qualified practitioner in Abhoynagar. In Mirsarai, 6% did not consult any practitioner, 40% consulted an unqualified practitioner and 54% consulted a qualified practitioner. Limited number of case studies on the role of adult children in supporting daily activities of living for ageing parents with disabilities reveals division in care giving and gross neglect.

In conclusion, like other citizens, ageing parents also have equal rights and are entitled to all available social services as also to lead a socially, physically and mentally sound life. The national government is also obligated to make social services available to support their living and protect all rights. Limited analysis of population-based information on disabilities resulting from stroke/paralysis provides some impression of the magnitude of the problem and its consequence on ageing in two rural areas, but may not be representative of rural Bangladesh.

Filial Support and Psychological Aspects of the Health of the Elderly in Iran

Mahmoud Ghazi Tabatabaie¹, Majid Koosheshi and Marjan Jamshidi

University of Tehran, Iran

E-mail address: ¹mghazi@ut.ac.ir

Until very recently, research on ageing and health of the elderly has investigated the one directional and single dimensional effect of filial support on the health status of the elderly. While some of these studies have confirmed the existence of such a relationship, others have failed to support it. More recent studies have looked at the multidimensional nature of filial support and the health of the elderly on the one hand and the bi-directionality of such relationship with regard to certain dimensions of filial support and health of the elderly. How are different dimensions of filial support related to various dimensions of the physical and psychological health of the elderly Using a sample of 527 elderly persons aged 60 or more, in Tehran, Iran, the relationship between emotional, instrumental, and financial dimensions of filial support and the physical and psychological health of the elderly was investigated. The results indicate that while lack of physical health of the parents necessitates, and consequently increases, the demand for instrumental support, increased emotional filial support tends to reduce loneliness and risk of depression. Furthermore, elderly persons with poor physical health are more prone to depression and more likely to be in need of financial support from their children which, in turn, further exasperates their risk of psychological health and depression. Financial filial support tends to lead to poorer psychological health and heighten the risk of depression significantly. While, higher levels of feeling lonely significantly increase the risk of depression, higher levels of education tend to reduce the feeling of loneliness and lead to a lower risk of depression. Higher age of the elderly tends to reduce the risk of depression, both through direct and indirect means.

The Role of Behaviour Change Communication (BCC) in Maternal and Neonatal Health

Ashfa Hashmi

Population Council

E-mail address: Ahashmi@popcouncil.org

Pakistan, with low socio-economic status of women and high maternal and neonatal death rates ranks 138th among 170 nations of the world in terms of human development (UNDP Report 2005). The status of women's health is poorer among rural, illiterate and women living in the far-flung areas of Pakistan. The five major reasons for high maternal deaths can be classified as: the low socio-economic status of women; poor nutrition, particularly during pregnancy and lactation; high risk pregnancies (too many, too close and too late), poor access to health services, and poverty (Farid Midhet, 2000). Besides, from other programmes for reducing maternal and neonatal mortality in Pakistan, particularly among low socio-economic status communities, behaviour change communication (BCC) can play a key role in helping people to understand their health status and the reasons behind their health problems. It can also help people to acquire a range of appropriate solutions to their problems and help them to improve their health status and bring about a positive change in their overall living conditions. The project was started in rural DG Khan District of Pakistan in October 2003.

The study design aimed at bringing about change in attitudes and behaviour by empowering women while imparting correct information on safe health practices to help the other component of the project in reducing neonatal and maternal deaths in the district. Study objectives were: (1) to assess the role of BCC in empowering women and their family members in decision making for maternal and neonatal health in the district, and (2) to assess the level of awareness and sensitization regarding maternal & neonatal health care among men and women before and after the BCC intervention. Data for the study came from a baseline survey - Safe Motherhood Applied Research and Training undertaken by the Population Council in District D G Khan, Pakistan. A household level baseline and follow up survey data were also used to assess the level of impact of the intervention in the district.

Keeping in view the importance of development communications, BCC was an integral part of the Population Council's SMART (2003-2006) project in District D.G Khan. Sixty communities were selected from the district. A total of 7,000 and 8,500 married women of reproductive age from households in the selected area were interviewed.

Findings of the study have significant policy relevance. (1) Findings reveal an increased level of male involvement and participation of women in taking the correct decision at the right time when seeking maternal and neonatal health care. Women attributed this change to the provision of information given through the BCC intervention. (2) Findings substantiate the instrumental role of effective communications tools in bringing about attitudinal and behavioural changes that facilitate the elimination of harmful health practices, breaking down of taboos, and greatly influence the reduction of maternal and neonatal deaths. (3) Findings can be used to improve health and education; they have a direct bearing on the Government and stakeholders; policy recommendations argue for incorporating effective communication as an integral part of the initiative to reduce maternal and neonatal deaths at the community level. (4) The intervention empowered women to make timely decisions which played a vital role in producing positive outcomes regarding maternal and neonatal health. (5) Enhanced levels of knowledge helped the people to reach appropriate services outlets.

Disparities in Health and Health Care among Elderly in India: Does Living Arrangement Matters?

Sutapa Agrawal

Public Health Foundation of India,
E-mail: sutapaiips@rediffmail.com

More than 100 million population (8% of total population) in India are elderly, higher than the combined population of UK and Canada. Recent evidence from India suggests a growing prevalence of morbidity and poor health status along with significant increase in longevity in the elderly population. Clearly, the interests of the elderly, including their health concerns, are poised to take on greater prominence in coming years. Nationally representative studies on health and health care among elderly and the inherent gender differential on the risk factors at a national level are very few or not available. This study examined the gender differential in living arrangements of the elderly in India and the impact of living arrangements on their health status and treatment seeking behaviour.

Data for the study come from NFHS-2 conducted during 1998–99. The present paper is based on 39,694 elderly people, and data were extracted from all India household samples of around 5,00,000 persons. Bivariate as well as multivariate techniques have been used for data analysis. The significance of differentials was measured using the chi-square technique. In multivariate analysis, binary logistic regression analyses were used. Further, GIS (Geographical Information System) Maps have been prepared to show the state wise spatial variation in the total elderly population and the elderly population living alone in India. Findings show that overall, 3% of the elderly are living alone in India, 1.7% men and 4.5% women. Significant gender variations in morbidity exist among the elderly, and living arrangements are associated also with morbidity. Relatively larger proportions of elderly males than females are found to suffer from asthma and TB. Moreover, living alone further worsens the health status of both elderly males and females. Elderly females living alone have the worst health status but males are more prone to environmental and nutritional risks. Larger proportions of elderly persons living alone (15%) are suffering from asthma than those living with family (10%). Likewise, almost twice as many elderly persons living alone suffer from TB as do those living with family. Elderly persons living alone have also been found to be more prone to malaria and jaundice than are the elderly living with family. Elderly persons living alone are also less likely to seek treatment than are those living with family.

In India, there are no policies and programmes for elderly persons living alone. Given shrinking family support systems, findings call for urgent health care strategies and a strong public support system to cater to the health needs of elderly persons living alone. Our primary health care system must be reoriented to tackle the needs of the growing number of elderly persons in the country. The private sector will also need to come forward to meet the needs of tomorrow's elderly generations. Social security systems and health-care plans must be formulated and implemented realistically and sensibly over the next few years for the well-being of the older people in India.

Consequences of maternal mortality on infant survival: Evidence from Matlab, Bangladesh

Abdur Razzaque and Md. A. Hossain

ICDDR,B: International Centre for Diarrhoeal Diseases Research, Bangladesh

Email address: razzaque@icddr.org

In developing countries, complications related to pregnancy and childbirth are the leading cause of mortality and morbidity among women of reproductive age. In 2000, there were 529,000 maternal deaths worldwide, of which more than 99% occurred in less developed countries. The potential social and economic consequences of maternal mortality are obvious, but reliable estimates of the problem are not generally available mainly due to data problems. The objective of this study is to examine the consequences of maternal mortality on infant survival.

The study examined the infant mortality rate of two categories of children of the same mother (born at maternal death and those born immediately before the last child) using data from the Matlab Health and Demographic Surveillance System of the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B). During the study period (1974-2005), there were 307 children born at maternal death and 222 children born just before the last child. These two categories of children were followed for one year for survival and migration. Life tables and Cox-regression models were applied for analyses.

During the early study period (1974-82), the infant mortality rate was 6.3 times higher for children born at maternal death than that of children born just before the last child while in the recent period (1982-05), the rate was 17.9 times higher. The higher level of infant mortality in the recent period for children born at maternal death is mainly due to high internal movement/out-migration (children) because of adoption compared to the recent period.

The study demonstrates that infant survival has worsened for children whose mothers died due to a maternal cause; this has policy implications for designing interventions to improve the survival of mothers and thereby, that of their infants.

Maternal Health Care Seeking Behavior in the Haor Area in Bangladesh.

Md. Aminul Haque^{1,2} and S K Das²

¹Institute of Public Health, Heidelberg University, Germany;

²Department of Population Sciences, University of Dhaka, Bangladesh

E-mail address: ¹aminuldps@gmail.com

The maternal health care (MHC) situation is worse in developing countries like Bangladesh due to inadequate access to modern health services and their poor utilization. Despite the government's serious commitment to deliver health facilities to the doorsteps of common people through innovative approaches, such as Essential Service Package (ESP), the utilization of health services is still far below any acceptable standard. This study was conducted to assess the maternal health seeking behavior of women living in the 'haor' area. Haor areas have different geographic characteristics wherein the plains are submerged under water for more than six months in a year and boats are the main means of communication. Large areas in the eastern part of Bangladesh have been classified as haor. Excessive precipitation, floods and storms seriously affect communication, movement and every other aspect of the lives of people in these areas.

The objectives of the study were to determine the factors affecting the utilization of MHC services in the haor area, and to assess the knowledge of mothers about maternal health care, as well as their attitudes and practices in seeking MHC services

A cross-sectional study was conducted in two unions of Hobigong district, in the eastern part of Bangladesh. Data were collected from 400 randomly selected women aged 15-49 years who had given birth in the five years preceding the survey, by using a semi-structured interview schedule. Information was obtained about the socio-economic and demographic characteristics of the respondents; their knowledge of health care facilities, the antenatal care situation, delivery care and postnatal care; mother's age at last birth, and birth order.

Results showed that 61% of the women did not even know about the maternal health care service available in the study area, implying that people have been living a life independent of the health system and its services. Only 36% of the women had received antenatal care (ANC). Among the service recipients, 47% had sought ANC from government health care institutions (i.e. Thana Health Complex, Union Family Welfare Center). The delivery scenario was worse; notwithstanding complications and danger signs, 95% of the deliveries had occurred at home and 92.5% had been attended by untrained birth attendants. While there is nothing wrong with home deliveries, when people ignore complications and do not have enough knowledge and the necessary support to access safe delivery services, home deliveries can cause women and infants their lives. Only 13.8% of the women and 12.3% of infants had received postnatal and newborn care, respectively. Communication, knowledge about MHC services, low income, decision, lack of an escort/companion to go to the health center were the usual factors that influenced lower utilization of MHC services.

Our findings lead us to conclude that the people of this area need to struggle continuously continuously with climatic variability precipitation, floods and storms. They feel for their health, the health of children and mothers, and loss of life but cannot pay attention to it while struggling to survive in the face of adverse situations. Floating and mobile health care service systems are urgently needed in Hoar area to deliver MHC services at the doorstep of dying mothers and to increase utilization of MHC services.

Mothers' Social Support Networks and Gender Bias in Child Health Care Seeking Behaviour in Rural West Bengal, India

Archana Kujur and S Parasuraman
International Institute for Population Sciences, Mumbai, India
Email address: archana.fe.k@gmail.com

Health care seeking is an important component of gender differentials in morbidity. In India, we find that bias in health care utilization is more pronounced in better-off population groups in states like Uttar Pradesh. Evidence of gender discrimination is strong especially in the case of treatment seeking for diarrhoeal diseases and for acute-respiratory infection (ARI). The hospitalization rate of girls as compared to boys is extremely low and a cause of concern. It has also been suggested that where fees are charged or referrals to a higher level of care are involved, families are likely to deny these more often in the case of daughters. Studies have shown that female children whose mothers have low autonomy are likely to experience higher mortality. Lower autonomy of the mother is also likely to lead to bias in providing preventive and curative care. It is an established fact that maternal characteristics like education and autonomy have a positive effect on health care seeking for female children. The relation of maternal social support networks and children's health care seeking is a phenomenon which has not yet been explored very deeply. Therefore, we have tried to explore this relationship through this study.

The objective of the study is to understand women's social support networks and health care seeking behaviour for their children.

The study uses primary data collected in the rural areas of West Bengal during December 2009-March 2010. The data were collected from 11 villages; 33 eligible women, i.e. women having children aged 0-5, were listed from each village leading to a total of 363 women. Three hundred and thirty women were finally interviewed; the response rate was 90%. The social support of the mother was defined in terms of her interaction with other people, and the support she gets from her friends, family or relatives in terms of her daily needs. Univariate, bivariate and multivariate analyses were carried out for the study.

Results show that women who have better social support have a positive effect on the health seeking behaviour of their female children; these women can independently take the child to a health facility, travel long distances for health care, and take decisions regarding the treatment of the child. These women do not show pronounced biases towards male children which, in turn, may benefit the female child and also enhance the child's chances of survival.

Thus we conclude that the social support of women does play a vital role in the treatment seeking behaviour of the women for her children; better social support increases her independence and decision taking power which is favourable for the female child who is otherwise neglected.

Access to Basic Amenities in Urban Areas by Size Class of Cities and Towns in India

Ram B.Bhagat

International Institute for Population Sciences (IIPS), Mumbai

E-mail address: rbbhagat@iips.net

Access to basic amenities like electricity, drinking water, toilet facilities, wastewater outlets and clean fuel are critical determinants of urban quality of life. For example, about 13% of urban households have no access to electricity, 16% have no access to safe drinking water, and 27% have no access to a toilet facility as per the 2001 Census of India. The situation has improved significantly in 2005-06 as per the National Family Health Survey-3; yet, 7% of households have no access to electricity, 8% have no access to safe drinking water, and 17% have no access to a toilet facility in urban area. About one-fifth of urban households are also not covered by any sewer facility.

This study analyses the access to basic amenities at both state and city/town levels covering 28 states, 7 union territories and about 5000 odd cities and towns.

Findings reveal that regional disparities in the pattern of basic amenities closely follow the level of urbanization at the state level. States with low availability of basic amenities in urban areas are also the states with low levels of urbanization. On the other hand, access to basic amenities varies in accordance with the size categories of cities and towns. Big cities (population of 100 thousand and more) show better availability of basic services compared to small urban centres (population less than 100 thousand). On the whole, variations in the availability of basic amenities like electricity, clean fuel (LPG) and drinking water show a direct relationship with the size of the city and town with the exception of toilet facility as mega cities (population of 5 million and more) show lower access due to the higher presence of slum households. For example, 44% of households in Mumbai have no toilets in their homes. It is to be noted that nearly half of Mumbai's population lives in slums which are mostly served by community toilets that are not always well maintained. Providing toilet facilities is a great challenge for Mumbai. The problem is also serious in Delhi where one-fourth of the households have no access to any type of toilet.

The paper shows that providing basic amenities to the growing urban population at the rate of close to 3% per annum is a Herculean task for both the big and small urban centres; access to water and sanitation being the most serious of these challenges.

Oral Presentation

Diversified Migration Flows of Rural-Urban Migrants and the Provision of their Housing Security in China: Insights from a Survey in Fuzhou

Liyue Lin¹ and Yu Zhu

School of Geography, Fujian Normal University, P.R. China

E-mail address: ¹lly19850207@yahoo.com.cn

Providing housing security to rural-urban migrants has been the most neglected area of social protection in China. However, in the last few years, it has started to attract more attention and some general approaches in such provision are being developed. Currently, the main responsibility of such provision rests upon the shoulders of migrants themselves and migrant employers; local governments of migrant destination cities have been increasingly involved in such efforts. However, their role in such provision is often seen as something additional to their usual housing provision to local urban residents, and their dominant approach is a residence-based one, relying very much on extending urban housing benefits and security to rural-urban migrants, without considering the differences in the needs between local urban residents and migrants and among migrants themselves. Lack of a deep understanding of migrants' mobility patterns, the simplistic assumption that rural-urban migration is a one-way process, and the desire of all rural-urban migrants to settle down in their destination cities contribute to the above approaches. Based on a survey of rural-urban migrants and subsequent in-depth interviews with them, their employers and officials of relevant government departments in Fuzhou, the capital city of Fujian Province in China, this paper examines the housing needs of rural-urban migrants in relation to their mobility patterns, and assesses the above approaches in providing housing benefits and security to rural-urban migrants in such a context. The paper is divided into three parts to achieve the above purposes. The first part of the paper provides a brief documentation of migrants' housing conditions, and the current approaches in meeting migrants' housing needs and providing housing security to them. The second part of the paper examines migrants' housing needs in the context of their mobile nature and their diversified migration flows, demonstrating that the floating housing needs of migrants should not be neglected, and that migrants have housing needs different from local urban residents and among themselves. The third part of the paper examines the relative roles of government at various levels, migrant employers, and migrants themselves (including their hometowns) in meeting the housing needs of rural-urban migrants in the above context of high mobility and its diversified patterns among different groups of migrants, and analyzes the desirability and inadequacies of the current approaches in providing housing security to rural-urban migrants. Based on the above analyses, the paper explores their policy implications, focusing mainly two issues. First, the multi-local nature of rural-urban migrants and the ensuing housing needs, and the needs of establishing a corresponding institutional basis dealing with such needs, with the State playing a bigger and coordinating role in meeting such needs. Second, the necessity of differentiating migrants among themselves and from urban local residents for the provision of housing benefits and security.

Internal Migration and Development in Vietnam: Issues for Policy Consideration

Dang Nguyen Anh

Vietnam Academy of Social Sciences, Hanoi, Vietnam

Email address: danganhphat1609@gmail.com

The paper examines key aspects of internal migration and urbanization that bring about opportunities and challenges for development in Vietnam. The discussion focuses on voluntary economic movements, with special attention to rural-to-urban migration. Such movements have become a viable option and strategy for improving people's livelihood and economic opportunities, more than have ever been the case before in Vietnam.

Although Vietnam has a relatively low level of urbanization, the country's urban growth rate surged from about 18% in 1986 to 30% in 2009. With 703 cities and towns, the country's urban population rose quickly from roughly 12 million in 1986 to 24 million in 2008 due mainly to net-migration and urban reclassification. Major cities have become the primary destinations of migration streams. Within a few decades, Vietnam will complete the urbanization process which took Western developed countries three to four hundred years to accomplish.

Employing data from the 2007 National Survey on Population Dynamics and reviewing the available migration studies in Vietnam, the paper indicates that industrial zones and large cities have been expanding, and that this growth is largely attributed to the influx of migrants, reflecting the disparities in regional development and rural-urban gaps. At places of urban destination, migrants have often found unfavorable environments, both legally and socially. They face challenges in their living and working conditions, and limited access to basic social services such as schooling, formal sector jobs, loan credits and public services. Local authorities display a neglectful attitude to migrants, due to the fact that they are not formally recognized as local residents.

The paper concludes and suggests key recommendations for policy changes aimed at reducing the costs of migration and overcoming current barriers to achieving appropriate policy measures. These changes will better reflect the reality of internal migration and urbanization in Vietnam while ensuring a sustainable and inclusive model of development.

**Impact of Internal Migration and Urbanization on Transformation of Rural Habitats
during the Emergence of a New City – Navi Mumbai**

Rita Abbi

Statistics Department, CIDCO Maharashtra

E-mail address: abbirita@gmail.com

The most dramatic urbanization trends in Asia, as witnessed during the post-half of the last century, are mainly attributed to rural-to-urban, circular migration and natural growth. Contrary to what has been reported in literature on internal migration and urbanization, the process of the emergence of Navi Mumbai which started in 1970, was somewhat different: It involved transformation of local rural habitats and shifting of people, offices and markets from the adjacent mega city of Mumbai. Over 15 million people have migrated to this satellite town of Mumbai during 1971-2009. The Government of Maharashtra has acquired land from more than 50 villages to develop the new city with the sole objective of easing the population pressure on Mumbai. The original habitats of the villagers have undergone phenomenal socio-cultural changes over the last few years and are still in a process of transformation on account of the urban culture brought by the migrants. In the beginning, it was a great divide between the local villagers and urban migrants. But over a short time of 39 years, the rural-urban divide has faded out. Interestingly, assimilation of urban culture has gone very fast into the psyche of the rural inhabitants.

The purpose of the present paper is twofold: First, to study the socioeconomic and demographic changes which have taken place in the households of original (rural) inhabitants during the last 40 years due to the implementation of various city development schemes launched by the state government in these years. Second, to find the impact of urban environment created by the urban migrants on the original (rural) inhabitants of the area in terms of household architecture, household composition, purchasing behavior of consumables, attitude towards educating children particularly, the girl child, commuting behavior, etc.

To accomplish these objectives, the data collected in the studies undertaken by CIDCO at four points of time, namely, 1971, 1995, 2003 and 2009 were used. The first study conducted in 1971 gives baseline information on the socio-economic and demographic characteristics of the rural households of the area by type of house, income, religion, family size, occupational structure, place of work, age, sex, marital status and education, possession of livestock and household items like, bicycle, bullock etc. In 1971, there was no planned development of nodes. These households were scattered into different disjointed clusters scattered over the entire area presently called Navi Mumbai.

Findings present the original condition of the villagers. In the 1995 study, some more information like rehabilitation package, possession of land, area of the house, availability of infrastructural facilities such as road, water, electricity, community center, schools, toilet facilities etc., was recorded in addition to what was collected in 1971. The studies undertaken in 2003 and 2009 had enlarged the scope. Besides the information collected in 1971 and 1995, the later two studies provide data on land acquisition, compensation given to villagers, utilization of compensation amount received and a host of other economic characteristics. Mainly, multivariate regression and trend analyses have been performed to achieve the objective.

**The Impact of Marital Dissolution of Parents on the Mental Health Status of Children:
Findings from an Action Research Project in Kolkata, India.**

Atanu Ghosh¹ and Ranjeema Chowdhury²

¹Institute for Reproductive Health, Georgetown University, Delhi, India; ²International
Institute for Population Studies, Mumbai, India
Email address: iipsatanu@gmail.com

Most studies on marital dissolution and divorce have collected data either from the male or female marital partner, and focused on the process of divorce and the socio-economic circumstances that follow a divorce. Other studies have tried to find out the socio-economic background factors which lead to such dissolution. Very few studies, however, have highlighted the problems faced by children after the marital dissolution of their parents or have asked children about problems resulting from such dissolution.

This action research is based on the counseling records of 408 street children (311 boys and 97 girls) aged 10-18, who had taken shelter in a NGO-run short stay home for runaway children in Kolkata, India, from April 2005 to March 2008. Ethical clearance for the study was taken from the ethical review board of the NGO. Data for the study were maintained with the help of a Microsoft Office Access based package, and analyzed using SPSS version 15. A psychological test was applied to measure the children's level of self-esteem.

Findings show that 30% of the boys and 43% of the girls had run away from home because of maltreatment by their step parents or the economic hardships of a single parent family. In most cases, the children had become a member of a single parent or a step parent family not because either parent had died but because their parents had separated. Children from 'marital dissolution families' scored significantly lower on the self-esteem scale compared to other children. Similarly, significantly higher proportions ever engaged in self-harming and delinquent activities than other children. Moreover, as an integral part of the runaway children's rehabilitation programme, home visits were made to understand the conduciveness of the children's family environment with the purpose of reuniting them with their respective families. Contacts with their biological parents, however, revealed that none of the marital dissolutions had followed a judicial procedure.

Socio-demographic Factors Associated with the Risk of Divorce: Evidences from Iran

Mahmoudian Hossein¹ and Reyhaneh Bagheri

University of Tehran

E-mail address: ¹hmahmoud@ut.ac.ir

The occurrence of divorce as a form of family dissolution has been increasing throughout the world over the past decades. This has been mostly attributed to new ideas, perceptions and attitudes towards the family, new patterns of family formation, and more liberal and relaxed views on family dissolution. Iran is currently experiencing relatively high divorce growth rates. The number of divorces has sharply increased from 35,211 in 1986 to more than 120,000 in 2009. The ratio of divorces to marriages has also risen from 8% in 1996 to more than 13% in 2009. The figures for 2009 show wide variations across provinces. The highest ratio (25%) was for Tehran while the province Sistan and Balouchestan had the lowest (4%). Using 2% sample data, at individual level, from Iran 2006 census, this paper aims to examine the probability of being divorced. The target population was married and divorced individuals aged 10 years and over. Findings show that the probability of being divorced is 7 times higher for women than for men. With a positive relationship between the risk of divorce and age (up to 50), individuals aged 30-39 are more likely to be at the risk. Although there is no clear relationship between education and divorce, women with primary and lower secondary education are more likely to be divorced than their illiterate counterparts. Being in the labor force, residence in rural areas, and having children have a negative relationship with divorce. Given the lower level of remarriage for women, women's lower labor force participation, late marriages, and below replacement fertility, the situation has major consequences in terms of the status of women, female-headed households, one-parent family, family structure and the future of fertility.

Marriage Dissolution in South Asian countries with special reference to India

Grace Bahalen Mundu and Sayeed Unisa

Department of Mathematical Demography and Statistics
International Institute for Population Sciences, Mumbai, India
Email address: grace.mundu@gmail.com

During the past several decades, marriage dissolution through divorce has increased drastically all over the world. Developing countries are not an exception to these worldwide changes. Not enough is known about the factors associated with marriage dissolution in South Asian countries. It is important to study marital dissolution because it has various impacts on the individual's fertility, health, mortality as well as the well being of his/her children.

This study is an attempt to study marital dissolution in seven South Asian countries, namely India, Bangladesh, Nepal, Pakistan, Indonesia, the Philippines and Vietnam, by geographical region in the context of India.

Nationally representative data, the Demographic Health Survey (DHS) dataset, has been used to study the effect of socio-economic characteristics on marital dissolution (includes the divorced, separated and deserted) in these countries.

Preliminary results suggest that the level of education is negatively associated with marriage dissolution. Thus, as the level of education increases, the chances of marriage dissolution decrease in India, Indonesia and Bangladesh; on the other hand, educational level is not significant for Pakistan, Nepal, Vietnam and the Philippines. One of the important findings is that women from urban backgrounds are more likely to experience marriage dissolution as compared to rural women; this was evident in almost all the seven countries. Religion too is a significant factor in most of the countries Muslim and Catholic women were more likely to experience marriage dissolution. Children have a strong influence on marital life; thus, women who had ever given birth in their lifetime were less likely to go through marriage dissolution. Marital duration also significantly affected dissolution; in all the countries studied, chances of marriage dissolution increased with an increase in marital duration.

The educational level of both partners was significant in case of India; as the level of education increases the chances of dissolution decrease. Caste or ethnicity and religion were also significant in case of India; women belonging to scheduled tribes, and to Muslim, Christian and other religions (Sikh, Parsi, Buddhist, Jain etc.) had greater chances of experiencing marriage dissolution as compared to Hindu women. Again, working status and type of occupation were important influencing factors; marriage dissolution was higher among women working as professionals and in other type of jobs. Women from affluent families and those who reported that their mother had ever experienced domestic violence from their father, were less likely to experience marriage dissolution in their lives. Region wise analysis shows that marriage dissolution varies by geographical region; women from the northern region were less likely to

experience marriage dissolution than those from other regions. Further analysis will be conducted on the basis of these preliminary findings.

Food Security, Deforestation and Gender in Garhwal Himalaya

Shiv Narayan Sidh^{1,2} and Sharmistha Basu²

¹Government College Gairsain, Chandigarh, India;

²Jawaharlal Nehru University, New Delhi, India

E-mail address: ¹shivsidh@gmail.com

The state of forest resources in the Himalayan region is not very encouraging despite the fact that forest cover in India has increased. This increase was due to a change in methodology and mapping trees outside the forest area. The forest cover in the Himalayan region is being depleted due to the increase in human population which creates household energy demand and the industrial demand for timber and non-timber forest products (NTFP). This has a significant bearing on household and village food security in the region. This paper investigates the impact of deforestation on young women's daily life and health from a gendered lens as well as their coping strategy. Food security of villages located in the fragile Himalayan environment is primarily dependent on eight prime forest products namely, timber, non-timber forest products (NTFP), grass, fodder leaves, hunting (not legally permitted), grazing, shifting cultivation (this is environmentally prohibitive) and fuel wood. Village reliance on forests has resulted in depletion of the quality of Van Panchayat's (village level forest committee) forests. This has severe implications on young women's day-to-day life and health in this region since they are solely responsible for the environmental goods collection (EGC's). Van Panchayats are formed to stop over exploitation of forests and have a set of rules and hold meetings at regular intervals. Women are generally not represented and their voices are barely heard in these committees. The current study has measured the fourth dimension of EGC's i.e. time taken to collect fuel and fodder along with distance, height and head load by trekking women with the help of a handheld Global Positioning System (GPS). Apart from this, focus group discussions (FGDs), in-depth individual interviews (IDI's) with the female groups, committee members and Sarpanch (head) were undertaken during February, March and December 2009 and January 2010. Analysis was conducted using Atlas/ti version 5.0.

Findings reveal that over the period (10 years) women have been increasingly facing the shortage of fuel wood, fodder and grass in the forests and have to spend on an average 8 hours and traverse more than 12 kilometers a day and climb, on an average, 1200 meters in a day with a head load of 35-40 kilograms. This has health implications. As a result, women are finding it difficult to cope with the work pressure and are left with no time for recreation and rest. Depletion of forests has adversely impacted the household's fuel wood and fodder security which is instrumental in defining the food security and economic security of the village. Women have reported that they are finding it increasingly difficult to meet the domestic needs of energy and fodder. Shortage of fodder has led to difficulties in maintaining livestock in many households and low input of animal proteins in the diet. This is posing a threat to household nutritional and food security. Women are at the receiving end of policies of the Van Panchayats, state government and central government due to restrictive policies without addressing the root cause and providing alternate sources of energy and fodder.

**Living and Health Conditions of Selected Cities in India:
Prioritising Challenges for National Urban Health Mission**

Srinivas Goli, P. Arokiasamy, Aparajita Chattopadhyay
International Institute for Population Sciences, Mumbai, India
Email address: sirispeaks2u@gmail.com

The concept of a healthy city is aimed at improving the physical, mental, social and environmental well-being of people who live and work in urban areas. Making healthy and sustainable cities is a prime objective of the National Urban Health Mission (NUHM). However, this requires prioritizing key concerns, strategies and guidelines for the programme of action.

This paper provides critical insights on the living and health situations in selected major cities of India, with special emphasis on slums, to help policy makers to prioritize key policy issues. It demonstrates evidence that some of the major cities of India face significant deficits in the coverage of basic amenities: pucca houses, safe drinking water, improved sanitation facilities and electricity. The demographic and health conditions lag far behind the goals set in the National Population Policy 2000 and National Health Policy 2002. Despite the supposed proximity of the urban dwellers to urban health facilities, their utilization is limited and more than two-thirds of urbanites do not use government health facilities.

Living Environment in Slums and Non-slums and Prevalence of Acute Respiratory Infection among Children in Eight Selected Cities of India

Chandrashekhar and R B Bhagat

International Institute for Population Sciences (IIPS), Mumbai, India

Email address: shekhar_tanman@yahoo.com

Slums have been predominantly viewed as social disorganizations. The most pressing environmental health problems today, in terms of disease, illness, disabilities and even death are associated with poor households and communities. It is important here to analyze child health in terms of acute respiratory infection (ARI) in slum and non-slum areas of various cities of India to get a comprehensive understanding of the phenomenon because children are the most vulnerable section of society, and are at the highest risk of getting the disease. Given the intimate link between living environment and health, an attempt has been made to examine this link on the basis of large scale data across several cities in India and also between slum and non-slum areas of these cities.

The objectives of this research are to study the living environment in the slum and non-slum areas of urban India and its eight selected cities. At the same time, the study also aims to find out the prevalence of ARI and its determinants in slum and non-slum areas of the selected cities. The study estimates the effect of sources of air pollution on ARI among children less than five years of age.

The analysis is based on 5,019 children aged 0 to 4 years included in India's National Family Health Survey (NFHS-3) conducted in 2005-06. To visualize the living environment of the slum and non-slum areas, bivariate analysis has been conducted. Logistic regression analysis is used to estimate effects. Different models have been run to see the independent effect of household environment and after controlling for other variables on ARI.

Living environment includes household environment. In slums, the household environment is appalling as compared to non-slums. Access to potable water and toilet facilities is not adequate in slum areas; this invites a host of diseases. Further, in the majority of slum areas, there is a problem of indoor smoke that may cause respiratory diseases to women in general and children in particular, because they are most exposed to the prevailing environment. The prevalence of ARI in slum and non-slum areas is high in relatively small cities like Indore, Meerut and Nagpur. In NFHS-3 children living in households using only biomass fuels for cooking are almost one and a half times more likely to have suffered from ARI during the two weeks preceding the date of interview as children in households using cleaner fuels (OR = 1.49; CI = 1.39-1.68). This effect is somewhat increased when environmental tobacco smoke (ETS) and other indoor smoke variables are statistically controlled (OR = 1.52; CI = 1.16-1.98). When environmental variables, child level variables, mother level variables and household level variables are additionally controlled, then among other variables, ETS, cooking smoke and type of cooking stove are found to be statistically significant contributors of ARI among children in slum areas.

Managing biodiversity rich areas in India: Balancing biodiversity conservation with livelihood concerns

Dr. Yogesh Gokhale, The Energy and Resources Institute (TERI)

Email address: yogeshg@teri.res.in

India is one of the megadiverse countries in the world, comprising two biodiversity hotspots, covering around 600 protected areas comprising about 4% of India's forest cover. Along with the network of protected areas in the country, India also has about 14 Biosphere Reserves, 25 Ramsar Sites (ecologically important wetlands) and estimated 400,000 sacred natural sites protected by local communities. Besides, India has a population of about 3.7 billion considered to be forest dependent communities with ambiguous rights over land as well as livelihoods.

The search for livelihoods is also a crucial factor in illegal activities like trade in wildlife. There are an increasing number of cases of illegal wildlife trade in India. It is evident that this illegal wildlife trade is well organized and includes the participation of local communities living around these forested areas, mainly for earning a livelihood. The seemingly overnight disappearance of tigers from the Sariska Tiger Reserve is symptomatic of the threats posed by a combination of factors such as people-wildlife conflict resulting from shrinkage of wildlife habitat and corridors, poaching and illegal trade, and site-specific management lapses.

To reduce the pressure on the forests by the forest dwelling communities, Eco-development programme has been launched in many protected areas (PAs). Out of more than 600 PAs, an estimate is that in not more than 100 PAs, issues of dependence of local communities on the surrounding natural habitats have been addressed so far. Evaluations and reviews seem to point to several deficiencies in these programmes. There has been a continuous process of rehabilitating local communities outside protected areas and it has turned out to be a scenario where communities have suffered at the cost of wildlife.

Thus, there lies a tremendous challenge in managing the biodiversity in the country in the context of the intense economic pressures and developmental aspirations. At the same time, the way of achieving economic progress has left a substantial section of society without much choice about subsistence livelihoods other than depending on the natural resources. Hence, within the present scenario, the distribution of biodiversity has become vulnerable due to isolated forest areas confronting the inhabited landscapes and the forest dwelling communities are paving the way for wildlife conservation at the cost of their livelihoods. There is a long way to go for managing both the tasks of biodiversity conservation and securing livelihoods of the local communities in India. There is a need to revamp the approach to tackle these issues of conserving biodiversity along with the vulnerable local communities for sustainable development.

Women on the Move: Process of International Labour Migration of Women from Kerala, India

Reshmi R S¹ and Sayeed Unisa²

¹Tata Institute of Social Sciences, Mumbai, India;

²International Institute for Population Sciences (IIPS), Mumbai, India

Email address: srreshmi@gmail.com

The feminization of migration is an important feature in recent times although it is less explored. In the past, female migration in India was neglected since it was considered as a passive addition to their male family members. While a reasonable proportion of migrants in India originate from the state of Kerala, there is a lack of information about issues related to women's migration. The present paper, based on primary data collected from six villages in Kerala, focuses upon the process of women's labour migration from Kerala. The study shows that majority of the women migrants were less educated and had migrated for domestic work. Recruiting agencies played a crucial role in the migration of the women. Most of the migrants had to pay a large amount as the cost of migration and this was the major problem faced by the migrants at the time of migration. While a few women managed money for migration from their own savings, others had arranged by borrowing from money lenders or other villagers. Majority of the migrants did not know the procedural aspects of migration and there were cases of undocumented migration as well.

Transnational Mothering: Sri Lankan Domestic Workers

Swarnalatha Ukwatta

Department of Demography, University of Colombo

Email address: ukwattas@yahoo.com

With the increasing involvement of Sri Lankan women in overseas employment as domestic workers Sri Lanka is seen as a country of growing numbers of transnational families with mothers being absent for a significant part of the growing up period of their children. The majority of these migrant women is married and has at least one child, and leave their children behind with other family members. While they usually make arrangements to accommodate the spatial and temporal separation forced by migration, this poses challenges to both mothers who migrate and their children left behind. The issue of children left behind by migrant mothers has attracted growing attention from policy makers in Sri Lanka recently. However, the social and emotional ramifications of mothering from a distance and how mothers cope with them remain inadequately investigated. This paper examines this issue using the data collected in a survey of 400 migrant families and focus group discussions conducted in Sri Lanka in 2008. While the education of children is positively affected by their mother's migration, they also experience several negative effects. However, mothers' absence does not always have negative consequences on children due to two reasons. Firstly, many of the mothers do not totally abandon their children but continue to take the responsibility of childcare from abroad. Transnational communication is one of the methods used by these women to maintain intimacy with their children. Secondly, many migrant families are able to cope with the challenges of family separation with the support of family members. I illustrate the importance of investigating the issue first, explaining the background information of migrant families and motivations for their migration as a survival strategy. The methodology used in the study is then explained. Next, I explain the consequences of mothers' migration on children left behind and how these mothers negotiate care work from a distance. Finally, the perceptions of female migrants and their family members on migration of women are discussed followed by a discussion of policy implications.

**Mothering from Abroad:
Transnational Family Life of Indonesian Migrant Domestic Workers in Hong Kong**

Ekawati S. Wahyuni¹ and Sri Setiawati²

¹ Faculty of Human Ecology, Bogor Agricultural University, Bogor, Indonesia

and ² Ministry of Labor, Government of Indonesia, Jakarta, Indonesia

Email address: ekawatiwahyuni@gmail.com

Trans-nationalism broadly refers to multiple ties and interactions linking people or institutions across the borders of nation-states (Vertovec 1999). People who live apart across the globe create and maintain networks by using new technologies, especially telecommunication technologies, to connect with each other. In the era of global economy, the location of employment vacancies and labor force could be at different sides of the globe. The phenomenon of global economy has forced people to migrate from their country of origin to fill in employment vacancies in other countries. In recent years, the movement of people across the borders of nations, including that of people from Indonesia, is increasing.

This paper aims to explain the efforts of women ICWs in Hong Kong to provide for their children economically and yet maintain their mother identity from afar. The research is based on a case study conducted in Hong Kong in 2008. Data were collected from 30 migrant women working in Hong Kong and willing to participate in the research study. The respondents were already working abroad for more than five consecutive years, although they were not necessarily working in Hong Kong all the time, and had dependent children back home.

In 2008, there were more than four million Indonesians in the international labor force in Middle East and Asia-Pacific countries, including Hong Kong, and about 70% of them were women working as housemaids. Working as housemaids abroad has been accepted by many rural women in Indonesia as a strategy to make the family function better economically. Daughters support their parents economically, while wives leave their husbands and children in the villages to make ends meet. Women have been challenging the traditional role of wife and mother for the security of family economy. Women migrant workers have to endure a separate living from their children for years and depend on their husbands, mothers, mothers-in-law, or other relatives to care for their children while they are away. Nonetheless, migrant women have not completely surrendered their feelings of motherhood and maintain their mothering role by using various communication tools and strategies to keep in contact with their children. Although separated thousands of miles from their children, migrant women retain their role as prominent decision makers in their children's lives, such as in selecting the school in which their children will enroll, who their children will marry, or which job offer they should take or reject. They may get divorced, but they do not want to lose the mother's role in raising their children and in providing the best future for them.

Asian Female Migrants' Work Patterns: A Multicultural Analysis

Yaghoob Foroutan

University of Mazandaran, Babolsar, Iran

Email address: y_foroutan@yahoo.com

This paper focuses on Asian-born female migrants and highlights their work patterns from a comparative perspective. The residing country of this migrant group is the multiethnic and multicultural context of Australia where its substantial ethnic diversity throughout the world also provides the opportunity to examine Asian/non-Asian differentials. Since success in the labour market has been observed to be a key indicator of migrants' settlement in the host country (Vanden Heuvel and Wooden, 1996; Bouma, 1994), the results of this study provide a basis to assess the settlement of Asian migrants.

The results of the study show that Asians who constitute more than one-third of the female migrants in Australia, came from various regions of Asia. This mainly includes South Asia (largely Indians and Sri Lankans), South-East Asia (mostly Vietnamese and Filipino) and Central and North-East Asia (mainly Chinese). The study also shows that the main features of migration from Asian countries to Australia differ markedly across countries. Using logistic regression analysis, multivariate results of the study also show that the status of Asian female migrants and their differentials with non-Asians, whether migrant or native, mainly tend to be explained by differences in human capital endowments and length of residence in the destination country.

Factors Affecting Non-marital Births in the Philippines: A Cohort Analysis

M. Midea Kabamalan

Population Institute, University of the Philippines, Quezon City, Philippines

Email address: mariamidea@gmail.com

Over the last ten years, the Philippines have witnessed a slow pace of fertility decline — the total fertility rate has fallen only from 3.7 to 3.3 children per woman in 2008. During this same period, while fertility declined among older women, it increased among teenagers.. Moreover, the percentage of cohabiting women almost doubled from 6.2% in 1998 to 11% ten years later. This paper examines factors affecting non-marital births using cohort analysis with data from several rounds of the National Demographic and Health Surveys (1998, 2003 and 2008). Place of childhood residence, education and age at first sex are among the factors examined.

Migration and Fertility: A comparison of fertility of native and Afghan women in Iran

Rasoul Sadeghi¹ and Mohammad Jalal Abbasi-Shavazi²

¹Tata Institute of Social Sciences, Mumbai, India;

²University of Tehran, Iran

Email address: rassadeghi@yahoo.com

Iran has experienced a considerable volume of immigration from Afghanistan in recent decades. Despite the large volume and long trend of migrant movement and its consequences, the demographic behavior of Afghan immigrants in Iran has remained unexplored. This paper aims, first, to examine fertility differentials between Afghan and native women; and second, to explain possible sources of variation in their fertility behavior taking into account various hypotheses on the relationship between migration and fertility.

The data for this paper is drawn from the 2006 Iranian census microdata sample files for the foreign and the Iranian population. These datasets were analyzed to address two questions: (1) does fertility (CEB) of reproductive-age women vary between native and Afghan immigrants? and (2) to what extent can these differences be explained by social characteristics and/or adaptation indices?

The findings demonstrate the key and important role of nativity/generational status in contributing to differential fertility. Fertility of Afghan women is higher than that of Iranian women. This difference is higher among the first generation than the second generation, and fertility of the latter group is intermediate between those of the first generation and native women. In multivariate analysis, controlling for woman's age, we find that immigrant-native fertility differentials can mostly be explained by differences in social and economic characteristics. In fact, the higher fertility of Afghan immigrants can be accounted for by their low levels of structural adaptation or differential opportunity structures especially in educational attainment. The remaining differences after applying statistical controls for first generation may have been due to proximate determinants of fertility as well as cultural factors and norms of various immigrant groups.

Fertility as Insurance: Evidence from Rural Nepal

Melanie Frost

University of Southampton, Southampton, UK

E-mail address: melanie.frost@soton.ac.uk

The notion that children might be used as a form of insurance in certain circumstances is longstanding. The idea is intuitively appealing given that children obviously have the potential to mitigate disaster in certain situations (e.g. old-age, widowhood, landslides or floods). Not only this, but it is a fact that in certain settings children (both young and old) do help their parents through household chores, agricultural work and remittances. The only question is whether the potential need for this help, both financial and physical, motivates couples to have more or less children depending on their level of risk i.e. do children ever act as an insurance good? This paper studies the applicability of this insurance hypothesis to the rural Nepali setting and tests its likelihood using survey data. Data from the Nepal Living Standards Surveys (the NLSS I in 1996 and the NLSS II in 2003) are used. In this paper, I concentrate on financial rather than physical assistance from children. Firstly, I have found that the level of financial assistance received depends on a variety of factors including the financial situation of the household, caste/ethnicity and region of Nepal. The majority of remittances are sent by sons, and households in the most deprived regions (such as the Western regions of Nepal) are generally more likely to be in receipt of remittances. For those rural households in receipt of remittances, these account for almost 40% of their income on average. Having established how important remittances are to many poor (and non-poor) rural households the next question is whether childbearing decisions depend on the expected level of remittances from children, and in particular, sons since daughters only account for 10% of those sending remittances. In other words, will families have more children and greater son preference if they are at greater risk and if their sons are likely to provide more financial assistance? In order to answer this question both community data and panel data are used. I will present evidence that the level of risk and the level of remittances in a community in 1996 (at the time of the NLSS I) affected both the subsequent fertility rate and the level of son preference in that community. This was the case even after other factors such as religion, education and income had been controlled for. It is concluded that the insurance motive for childbearing is not only rational, but also a genuine reason that people in rural Nepal choose to have more children and particularly sons. If the fertility rate is to fall in the most deprived areas as it has in urban areas and wealthier rural areas, alternative forms of insurance need to become available to these people.

Do Social Interactions Matter in Fertility Behaviour among Women in Rural Uttar Pradesh, India?

Praveen Kumar Pathak¹ and Faujdar Ram

International Institute for Population Sciences, Mumbai, India

E-mail address: ¹pkp_pathak@rediffmail.com

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. We also attempt to identify the two important mechanisms of social interactions i.e., social learning and social influence, and investigate how they influence fertility preferences and use of family planning methods 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 first author's 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 600 currently married women in the age group of 18-35 years. We also conducted focus-group discussions and in-depth interviews among husbands to understand their views related to fertility and family planning in the village of study. 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. However, we did not find a strong effect of social interactions on fertility preferences.

Feasibility of Expanding the Medical Abortion Provider Base in India to include Ayurved Physicians and Nurses

Shireen Jejeebhoy, Shveta Kalyanwala, Shuchita Mundle, Jaydeep Tank, A.J. Francis Zavier,

Rajesh Kumar, Rajib Acharya, Nita Jha

Population Council, New Delhi, India

Email address: sjeeebhoy@popcouncil.org

Women have been legally entitled to abortion in India since the MTP Act of 1971 was passed; in 2002, medical abortion (mifepristone-misoprostol) was approved for use for pregnancy termination in gestations of up to 7 weeks. Nevertheless, most of the estimated 6.7 million abortions performed annually in India take place in unregistered facilities and are performed by non-certified providers and 8% of maternal mortality is attributed to complications of unsafe abortion. One of the main obstacles to safe abortion is women's limited access, in practice, to appropriate facilities and trained providers. Evidence from elsewhere has highlighted that non-physicians can and do offer abortion services and that there are no significant differences in the complication rates for even MVA undertaken by nurses and doctors.

The objective of this paper is to report findings from research that compares the efficacy and safety rates associated with medical abortion provided by such providers as physicians trained in Ayurveda system of medicine and trained nurses – currently not permitted to provide abortion services to that of MBBS physicians recently trained in MA provision. Using an equivalence study design, this study explored whether rates of failed medical abortion and complications resulting from medical abortion conducted by such providers as Ayurveds (physicians trained in an Indian System of Medicine) and nurses holding a B.Sc or diploma are equivalent to those conducted by recently trained MBBS physicians. The study was undertaken in five clinics of an NGO service provider in Bihar and Jharkhand.

A total of 30 providers (10 each of Ayurved, nurses and MBBS doctors) and 1225 women were recruited. All providers underwent extensive training. The study protocol followed was Day 1-200 mg oral mifepristone; Day 3-400 µg oral misoprostol; Day 15 - follow up visit for abortion confirmation. The study design includes a number of measures aimed at maximizing client safety. Key outcome indicators include failure to assess eligibility and completion status of abortion accurately, compliance failure, method failure, complication rates and acceptability reports.

Study findings confirm that outcomes recorded by Ayurved physicians and nurses are statistically equivalent to those recorded by MBBS physicians. Eligibility assessment failure rates were 3-4%, and failure to assess completion status accurately was 4-6%. In addition, compliance failure rates of 4-6% were observed, and method failure ranged between 5% and 6%. Rates for complication and acceptance of provision of abortion services, irrespective of the provider type were also comparable.

Findings highlight that when appropriately trained, medical abortion up to 56 days of pregnancy can be provided safely and effectively by Ayurved physicians and nurses. They make a compelling case for expanding the medical abortion provider base to include non-physicians.

How Prepared are Our Auxiliary Nurse Midwives and Health Sub-Centres for Skilled Birth Attendance?

Manju Shukla¹ and Hanimi Reddy Modugu²

² The Vistaar Project, IntraHealth International, Inc.

Email address: reddyhanimi@rediffmail.com

Evidence shows that skilled care at birth reduces the risk of maternal mortality. Ensuring skilled attendance at every birth and access to quality emergency obstetric care, hence, are critical interventions, with a potential to achieve MDG5. To reduce the high maternal mortality ratio in Jharkhand (312 deaths per 100,000 births), the state government requested the Vistaar Project to provide technical assistance in instituting skilled birth attendance (SBA) training for all its Auxiliary Nurse Midwives (ANMs). Before initiating the training, a baseline survey was carried out to obtain and document threshold information on the preparedness of ANMs and readiness of Health Sub-Centres (HSCs) to provide SBA.

This paper assesses the knowledge and practices of ANMs with regard to the use of a partograph, active management of third stage of labour (AMTSL), newborn care, postnatal care, handling complications in pregnancy, and delivery and supervisory support. It also assesses their prioritization of SBA in relation to other job functions. Finally, it reviews the stock and supply situation in HSCs and Primary Health Centres (PHCs). The study uses a pre-post design; while findings presented here are from a baseline survey (November-December 2008) in Deoghar and Palamau districts, which covered 136 untrained ANMs, 12 Lady Health Visitors (LHVs), six Staff Nurses (SNs) and 18 Medical Officers-In-Charge (MOICs) in addition to 136 HSCs (to which these ANMs were attached), and 18 PHCs. Pregnant and recently delivered women were not covered as the District Level Household Survey (DLHS-3) offers reliable data on the utilization of health services by these groups.

Findings revealed that for 75% of the ANMs, SBA was not considered as one of their three top priority duty areas. Without probing, they displayed limited knowledge of pregnancy-related complications and complications during delivery. Only about half had dealt with/referred complicated pregnancies to a higher facility during the six months preceding the survey; the majority feel that the HSCs to which they are attached cannot handle pregnancy complications. Further, among 60% of ANMs who kept records on deliveries, on an average, each ANM had either handled or referred ten complicated deliveries during the six months preceding the survey. few (13%) were aware of partographs and 29% had heard of AMTSL, and even fewer of steps involved in AMTSL. Only one-third were aware of the use of oxytocic drugs to prevent haemorrhage. In fact, the supervisors (MOICs/LHVs/SNs) themselves appeared to lack complete knowledge of SBA requirements. On the other hand, awareness of essential newborn and postnatal care was relatively higher among ANMs. Health facilities, too, fell short in necessary infrastructure and essential drugs and supplies for conducting safe pregnancies, deliveries and essential newborn care.

To sum up, besides adequately equipping health facilities to provide quality SBA, the ANM-SBA training should focus on essential knowledge and skills for providing effective SBA services namely, antenatal care norms and skills to implement these norms, recognition and handling of complicated pregnancies and deliveries at home/HSC or refer them to a proper facility, use of partograph and methods of AMTSL, importance of timely first postnatal visit to ensure early initiation of breastfeeding, drying and wrapping of the newborn, recognition of symptoms and

management of postpartum haemorrhage and, supportive supervision training to supervisors of ANMs.

**Early Pregnancy Detection and Reproductive Health Referral
by Female Community Health Volunteers in Nepal**

Anuja Singh¹, Kathryn Andersen Clark², Meena Kumari Shrestha¹, Mukta Shah¹ and Leila Hessini²

¹Ipas Nepal, Kathmandu, Nepal; ²Ipas, Chapel Hill, USA

E-mail address: ²clarkk@ipas.org

Female community health volunteers (FCHVs) have been identified as a possible entry for Nepali women to access timely reproductive health services, including antenatal care, comprehensive abortion care, and family planning.

The objective of this study is to evaluate the success of a pilot programme training FCHVs in early pregnancy detection using urine pregnancy tests, counseling, and referral to appropriate antenatal, safe abortion, and contraceptive services.

Between July 2008 and June 2009, 2500 selected FCHVs from six districts in Nepal were trained to implement the early pregnancy detection and reproductive health counseling programme. FCHVs participated in their own district's review meeting and were interviewed about their contacts with women. In addition, open discussion led to the identification of programme successes and challenges. Preliminary data from review meetings held in 5 of the 6 districts are presented here.

Findings show that of the 1306 trained FCHVs who participated in the review meetings, 1049 (81%) reported the use of one or more urine pregnancy tests with women. In total, 3624 urine pregnancy tests were conducted. Among these, 1724 were negative; 47% of these women received contraceptive counseling and 9% were referred for contraceptive services. In addition, 21% received condoms and 23% received oral contraceptive pills from the FCHV. Among the 1900 women with positive pregnancy tests, 69% were referred for antenatal care and 31% referred for safe abortion services at the woman's request. FCHVs were happy with the increase in skills that arose from use of the urine pregnancy test for early pregnancy detection. Their ongoing counseling skills and reputation in the community were an asset for enhancing women's access to reproductive health services. Challenges to implementation included use of the formal referral card (both for women going for services and for FCHV record keeping), resupply of urine pregnancy tests through the private sector, and availability of service providers at the time that women (and at times, the FCHVs) arrive for services. Anecdotal evidence suggests that District Public Health Officers (DPHOs) are also happy with this enhanced role of FCHVs and the improved access to services that has resulted at the community level.

The study concludes that mobilizing a large number of FCHVs with the materials and supplies required for early pregnancy detection and referral is a viable method for improving access to reproductive health services at the community level in Nepal. Attention needs to be paid to ensuring service availability, urine pregnancy test supply and creating viable options for record keeping and/or ongoing evaluation of FCHV services as this intervention is scaled up to additional districts.

Updating Asian Transitions to Adulthood on the Basis of Adolescent and Youth Surveys

Peter Xenos¹ and Quamrun Nahar²

¹University of Hawaii, USA; ^{1,2} East-West Center, Honolulu, Hawaii, USA

e-mail address: ¹xenosp@hawaii.edu

Adolescent household surveys have been conducted across Asia starting in the 1980s, mainly for the immediate goal of informing and shaping adolescent and youth policy. But these same surveys serve an historical and documentary function since they provide evidence of the dramatic structural transformations of the years of life between puberty and adulthood, and do so during a period of epochal social change. This historical-documentary function will gain in importance for many countries as we accumulate a series of surveys spanning, sometimes, decades of time. Empirical, survey-based research has described important similarities among the countries and their youth populations, as well as distinct features associated with specific countries. Among the broad similarities so far documented are: (1) a flurry of initiations, first-time experiences of important life-events, occurring as a flurry of experiences beginning around the time of puberty and growing in intensity and scope in the years leading toward adulthood; (2) the extension of this turbulent period well beyond the teen years to the mid-twenties or, for some populations, even beyond that, as entrance to marriage has been delayed; (3) the emergence or persistence of important differentials within national youth populations, including distinct patterns among ethnic groups, between urban and rural youth, and between youth sub-groups with different socio-economic backgrounds. The research reported in this paper uses a number of the extant surveys to gain a greater degree of coverage and comparison across Asia. The paper assembles data describing some of the important events of adolescence and youth for many South and Southeast Asian countries. For some there are dedicated youth or adolescent surveys in which many types of events are examined (these describe Indonesia, Nepal, Pakistan, the Philippines, Thailand, Vietnam, and Bangladesh). For a larger number of countries there are more general surveys (such as DHS rounds) which asked about at least a few of the events. And for a small number of countries, there exist two or more dedicated surveys covering a variety of events and allowing a description of changes across oncoming cohorts. Many of the surveys are large enough to allow a significant degree of disaggregation of national patterns — beyond the conventional male versus female and urban versus rural — to such background circumstances as social class, ethnicity or language group, and educational levels. In this paper, exploration and summarization of this complex body of information for many populations is achieved using a graphical display of patterns complemented by a set of summarizing indexes. These indexes are based on life table procedures designed to disaggregate the total adolescent life-years into periods and segments as defined by pairs of events. Certain events notably menarche, entrance to school, school-leaving and entrance to marriage — are notable for the way that they have re-shaped the whole process and generated much of the commonality of experience across countries that is described by the events data. The analysis can provide an important context for the shaping of programmes and policies related to the transition to adulthood.

Knowledge and Role of Adolescents and Parents in Deciding Age of Marriage in Jharkhand
Hanimi Reddy Modugu

The Vistaar Project, IntraHealth International, Inc.
email address: reddyhanimi@rediffmail.com

Although the legal minimum age of marriage for girls in India is 18 years, the traditional practice of early marriage is highly prevalent in some states, including Jharkhand. Early marriage and childbearing hinder the optimal physical development of adolescents, particularly girls, making them more susceptible to morbidities, poor quality of life for themselves and their babies, and mortality. The Government of Jharkhand requested the Vistaar Project to provide technical assistance to delay the age of marriage of adolescents in the state. The Vistaar Project conducted a formative research on this issue among adolescents aged 15-19 years, parents of adolescents and community champions.

This study seeks to understand the Intent, beliefs and behaviour regarding age at marriage, among adolescents and parents, the role and decision-making power of adolescents and parents in marriage-related decisions, and the perceptions and views of community champions regarding age at marriage. The quantitative part of the study was conducted in five districts of Jharkhand, and from each district, 1,000 adolescent girls, 1,000 adolescent boys and 1,000 parents (500 mothers and 500 fathers) of adolescents were selected by two-stage stratified random sampling. In addition, 200 community champions were also interviewed. A needs assessment study was conducted to gather qualitative data on existing norms, practices, customs and beliefs regarding marriage.

Findings reveal that profiles of adolescent boys and girls (aged 15-19 years) differed in terms of literacy, marital status and occupation. One out of every four adolescent girls was already married (median age at marriage being 16 years), while only 6% of the boys were married. Exposure to media (newspapers, television, radio) was significantly higher among boys than girls. Knowledge of correct legal age at marriage for girls was generally limited among both sexes, although it was somewhat better among boys (69%) than girls (47%). Parents were less knowledgeable (fathers: 42%; mothers:24%) than their adolescent children, and community champions were more aware of issues related to marriage than both adolescents and parents. Protection for girls, availability of a suitable boy, and the smaller amount of dowry required for an underage bride were important reasons quoted by parents for marrying off their daughters early. Marriages can be delayed by allowing the girl to complete her education and spreading awareness about the legal age of marriage and ill-effects of early marriages. Parents acknowledged their authority in deciding when their children should marry and it was within their control to delay the marriage. Girls had little say in the timing of marriage or in the choice of partner (only 39% and 46% of married girls, respectively, were consulted).

Lack of ownership by Government departments on the issue of marriage, lack of awareness about the ill-effects of early marriage or the benefits of late marriage, absence of a focused communication strategy, powerlessness of adolescents to negotiate and the lack of focus of strategic decision-makers are key hurdles to delaying the age at marriage in the state. We conclude that communication strategies, including interpersonal communication, by frontline workers, and community-based health communication campaigns geared towards disseminating appropriate information, coupled with strategies to retain girls in schools/colleges, can

significantly influence decision-makers to delay the marriage of their adolescent children. There is also a need to mobilize community champions to advocate the cause of delayed marriages.

Adolescent Childbearing and Infant Mortality in Bangladesh

Md. Nuruzzaman Haque¹ and Md. Kamal Hossain²

¹Department of Population Science and Human Resource Development, University of Rajshahi, Bangladesh

Email address: nzaman_pop@yahoo.com

In recent years, Bangladesh has experienced little fertility decline. However, adolescent childbearing (adolescent girls who are already mothers and first-time pregnant adolescents) is not only very high but is increasing, and likely to have adverse consequences for adolescent mothers as well as their children.

Considering the negative consequences of adolescent childbearing, this study explores the differentials in levels and trends of adolescent childbearing with respect to selected socio-demographic characteristics, and examines the factors that might account for the high incidence of adolescent pregnancy. It also analyzes the impact of selected socio-demographic characteristics of adolescent mothers on infant (neonatal and post neonatal) mortality.

The study uses data from the Bangladesh Demographic and Health Survey (BDHS) - 2004 and 2007. Bivariate analysis was performed to ascertain differentials in the levels and trends of adolescent childbearing. Adolescent women who are at greatest risk of becoming pregnant before reaching 20 years of age, were identified by the logistic regression method. Logistic regression and the Cox hazard model were employed to study the impact of socio-demographic characteristics on neonatal and post-neonatal mortality, respectively.

Findings of bivariate analyses indicated an increase in adolescent childbearing from 67.1% (already mothers: 57.1%; first-time pregnant: 10%) in 2004 to 69.3% (already mothers: 55.8%; first-time pregnant: 13.5%) in 2007. Social inequalities were evident in both the 2004 and 2007 surveys; adolescents with some education and belonging to other religions (except Islam) showed a lower probability for adolescent childbearing compared to those without any education and belonging to Islam. Adolescents living in rural areas were more likely to start childbearing than urban adolescents in 2004 but less likely to do so as in the 2007 survey. Logistic regression analysis to identify adolescents at greatest risk revealed that age at first marriage, ever use of family planning methods, ideal number of children and type of family are significant determinants of pregnancy among adolescent women. While another logistic regression analysis showed that socio-demographic characteristics such as mother's age at child birth, education, residence, sex of household head, religion, multiplicity of children and type of household have a significant impact on neonatal mortality, findings from Cox hazard model indicated that mother's age at childbirth, education and multiplicity of children are important determinants of post-neonatal mortality.

The study concludes that adolescent pregnancy is influenced not only by demographic factors but also by social and behavioral characteristics of adolescent women. This also holds true for neonatal and post-neonatal mortality among first-born children of adolescent mothers. Therefore, policies designed for reducing adolescent pregnancy should address age at first marriage, education and family planning programmes for adolescents.

**What are they Learning?
Lessons about Reproductive Health in Indonesian Primary and Secondary School Textbooks**

Iwu Dwisetyani Utomo¹, Peter McDonald¹, Terry Hull¹, Ida Rosyida², Tati Hartimah² and Nurul Ilmi Idrus³

¹Australian Demographic and Social Research Institute, ANU, Canberra, Australia; ²University of Islam National Jakarta, Indonesia;

³Hassanudin University-South Sulawesi, Indonesia
e-mail address: ¹Iwu.Utomo@anu.edu.au

After struggling to incorporate comprehensive reproductive health education in the Indonesian national school curricula, the Indonesian Government has added information on anatomical and normative aspects of reproduction and STDs/HIV/AIDS to the curricula of selected subjects. This paper assesses the content of primary and secondary school text books that reflect the new curriculum. Three hundred books were reviewed using a Reproductive Health Analysis Module developed by the authors to evaluate the depth of information given in Biology, Science, Sport and Health Education, Social Sciences and Islamic Religion textbooks.

The assessment covered the type of information given, anatomical accuracy, gender depictions, and the social and religious values applied to issues of HIV/AIDS, reproductive health and sexuality. The most comprehensive book that provides detailed and progressive information on HIV/AIDS and reproductive health can be identified based on the scores provided by the authors. The study also considers the grade at which the information is provided and its appropriateness to children's development stages. In explaining various ways to avoid transmission of HIV/AIDS, many books reflect narrow conservative assumptions about behaviour and fail to mention safe sex strategies or the efficacy of condom use. Interestingly, the gender depictions on HIV/AIDS information were minimal as compared with information on sexual harassment where women and girls were mostly described as causing such problem.

Preliminary results revealed that starting in Year 5, understanding of sexual harassment has been introduced very briefly. In Year 6, in Science, genital hygiene, specifically how to clean the vagina is explained. Information on how the vagina should not be disturbed by the use of various products is also explained briefly. In Biology, anatomical aspects of reproduction and human development are outlined but no information is provided about sexuality and reproductive health. Drug use and information on HIV/AIDS are included in some of the text books, while others include information on STDs. Information and data about violence against women, child prostitution and child sexual abuse are introduced in the later years in secondary school. Though found only in one book, gay marriage and the consequences of premarital pregnancy are explained very briefly.

More comprehensive information and understanding should be included in the national curricula on sexuality and reproductive health as well as the emotional and social aspects of sexual relationships that include more gender progressive norms and values.

To conclude, in general, some interesting information on sexuality and reproductive health is scattered across textbooks in various subjects but not as a topic on its own. Moral aspects and religious judgments on sexuality, menstruation, sex within marriage and adultery are given in Islamic Religion text books both in the later years of primary school and throughout secondary school. Anatomical aspects of

reproduction are provided in Biology, some social consequences of premarital relationships in Social Sciences text books for secondary. It is notable that the HIV/AIDS and drug use chapter is often appended as the last chapter (Chapter 12) after discussion of various sports and games activities in previous chapters.

**Knowledge is Empowerment: Addressing Young People's Sexual Health Risks
through DISHA Integrated Program in Bihar and Jharkhand, India**

Sushmita Mukherjee

International Center for Research on Women (ICRW), New Delhi, India

E-mail address: smukherjee@icrw.org

Living in communities characterized by early marriage, lack of access to information and services, poverty led migration and trafficking, young girls and boys from Bihar and Jharkhand are considered to be vulnerable to detrimental sexual health consequences and HIV. ICRW's DISHA baseline data (2004) reveals that with an average age at marriage of 16 years for young girls (14-24 years), service utilization is low, partly explained by poor SRH knowledge. Moreover, 74% of the adults disapprove of young girls accessing information on sexual matters before marriage. DISHA programme tests an intervention package to improve the reproductive health and well-being of young people in Bihar and Jharkhand. Sexual health information and life skills are provided to young girls and boys (14-24 years) through group sessions, peer outreach, adult support and youth friendly health services.

The project engaged 12,200 youth in 200 communities on a premise that participation in the interventions would improve knowledge and access to services, thereby reducing health vulnerabilities. In addition, there were activities to build community support for youth access to reproductive health information and services. A quasi-experimental design is used to evaluate the project with six study and two control sites across the two states. The implementation phase was framed by baseline and endline quantitative surveys involving 6000 male/female youth and adults in each round and 34 focus group discussions.

Endline findings indicate increased mobility, decision making around health service utilization and communication among couples and among youth as a result of participation in the programme. There is a significant increase in communication among young people about contraception. 55% of married girls reported knowledge of more than one symptom of STI as against 37% of those who did not participate. Double the proportion of married and unmarried girls reported increase in knowledge about source of contraceptives as compared to baseline. A significant decrease in the proportion of people was found who felt that young married couples should not have access to contraceptives.

Insights from the evaluation demonstrate increase in youth knowledge, autonomy and accessing sexual health services. It reflects the emergent need for integrated approaches to address both demand and supply sides of youth health to tackle the rising sexual health vulnerabilities among youth.

**Is Passing the National Exam Destiny?
Rethinking about the Importance of Reproductive Health Education for Young People in Papua and West Papua
Provinces, Indonesia**

Wienta Diarsvitri^{1,2}, Terence Hull², Iwu Dwisetyani Utomo², Peter McDonald² and Teresa Neeman³

¹Department of Public Health, Faculty of Medicine, Hang Tuah University, Surabaya, Indonesia; ²Australian Demographic and Social Research Institute, The Australian National University, Canberra, Australia; ³Statistical Consulting Unit, The Australian National University, Canberra, Australia

As of the end of March 2007, Papua and West Papua Provinces had the highest prevalence of HIV/AIDS among all provinces in Indonesia. Also, there are reports of high risk sexual behavior in the Papuan community, including multiple partners and early initiation of sexual activity. These features motivated researchers to introduce a reproductive health education programme for young people in Papua and West Papua Provinces. To date, little is known about the sexual knowledge, attitudes and behavioral intentions of young people in these provinces.

The aim of this study was to evaluate the effectiveness of the reproductive health education programme in changing young people's knowledge, attitudes and behavioral intentions associated with HIV and sexuality. The study was carried out between February and June 2009. A cluster randomized trial randomized senior high schools in Papua and West Papua Provinces. Sixteen senior high schools agreed to participate and were randomized to either receive the reproductive health education programme or act as a control group. Students of Year 11 from the selected schools (N=1074) took a pre-test and two months later, a post-assessment test. Changes in knowledge, attitude and behavior intentions between the two groups were compared using a mixed model.

Findings showed that the intervention was associated with 0.11 points of difference for knowledge (95% CI: 0.083-0.117), 0.13 points for attitude (95% CI: 0.092-0.272) and 0.18 points for behavior intentions (95% CI: 0.105-0.332) after adjusting for age, gender, previous sexual experience, ethnicity and pre test mean score.

Thus, the reproductive health education proved to be effective in changing knowledge, attitudes and behavior intentions of students. It is necessary, therefore, to rethink about the importance of including reproductive health education in the school curricula as a preparatory measure for students to protect themselves against HIV/AIDS.

**Utilising Community Resources for Youth Access to sexual and reproductive health Information and Services:
Creating Conditions for Scaling up at National Level**

**Ismat Bhuiya^{1,2}, Ubaidur Rob², Asiful Haidar Chowdhury², Zahiduzzaman³,
Haribondhu Sarma⁴ and Amanur Rahman⁵**

²Population Council, Dhaka, Bangladesh; ³BRAC University Public Health School, Bangladesh;

⁴ICDDR,B, Dhaka, Bangladesh; ⁵Ministry of Youth and Sports, Dhaka, Bangladesh

E-mail address: ¹ ibhuiya@popcouncil.org

Lack of sexual and reproductive health (SRH) knowledge and access to SRH information and services increases the vulnerability of youth to pregnancy, STIs and HIV/AIDS. In Bangladesh, formal SRH education and services for youth are very limited, especially for those who are unmarried. Thus, the country is looking for approaches for improving youth access to SRH information and services. In view of this, the Population Council in collaboration with the Department of Youth Development (DYD) of the Ministry of Youth and Sports conducted an operations research (OR) to improve youth access to SRH education and services. Youth aged 15-24 years were targeted for interventions. The OR findings showed that community resources like youth clubs are an appropriate place for conveying SRH education; trained youth can impart SRH education and promote condom use among their peers; and that access to life skills based SRH education and condom services have a significant impact on knowledge, attitudes and safer sex behavior of youth. The successful interventions of the OR study were scaled up and the lessons learned from it were re-examined. The objective of the scale-up study was to create conditions for expanding the intervention model at the national level.

The model tested during OR was scaled up. The scale-up study had preparation, implementation, and evaluation phases. Service statistics of youth clubs and clinics were analyzed to assess changes due to the intervention. A survey among 1200 randomly selected youth was conducted at the last stage of the intervention and findings were compared with those of the pre-intervention period collected during the OR phase. A total of 260 in-depth interviews were conducted among 120 youth, 60 peer educators, 60 club officials, and 20 DYD officials. The cost of implementation was collected and analyzed to predict the cost of scaling up at the national level.

Results indicated a significant improvement in comprehensive SRH knowledge and attitude among youth; the level of knowledge reached above 90%. Condom use during last sex increased from 44% to 55% among youth who attended all education sessions over the period of two years; 27% of youth received services from referral clinics and another 20% received STI/SRH services from other clinics - such use was absent during the pre-intervention period. Cost analysis suggested that a total of US\$ 600 would be needed on average for each club with a membership of around 400 youth.

The study demonstrated that the training model designed and tested for peer educators and monitors can be effective for peer educator training and building the capacity of the youth clubs. The SRH focused education model was also effective in bringing about positive changes among youth. Easy access to condoms can also increase safer sex behavior. 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 and cost-effective.

**Evaluating the Adolescent Sexual and Reproductive Health Initiatives of Kartada Samar:
Focus on HIV/AIDS Prevention**

Elmira Judy Aguilar & Fiscalina Nolasco

Department of Sociology & Anthropology, University of San Carlos, Cebu City, Philippines

Email address: rh_judy@yahoo.com

This undertaking is an assessment of the adolescent and sexual reproductive health (ASRH) initiatives of Kartada Samar (KS), with particular focus on its information and education campaigns in HIV/AIDS prevention. It aims to identify and measure whatever impacts emerged from the HIV/AIDS prevention activities of KS, and determine the extent to which the ASRH programmes have induced improvements in sexual and reproductive health knowledge, attitude and skills of the *Sangguniang Kabataan* and other young adults in selected areas in Samar, Philippines. Both quantitative and qualitative data were generated employing the following: survey, focus group discussions, and key informant interviews.

This study has shown that adolescents and SK officials from the intervention sites are more exposed to HIV/AIDS-related activities, and they appear to have an edge over the control sites insofar as knowledge of HIV/AIDS, including the signs and symptoms of STI, is concerned. Adolescents and SK officials in the intervention sites are generally appreciative of KS' ASRH and HIV/AIDS activities in their locality, particularly the small group discussions, radio broadcasting, and unveiling of billboards and posters. Given these, they have expressed willingness to continue their support for KS. There may be some inadequacies in the implementation of KS' ASRH activities, but data obtained point to study participants' appreciation and understanding of the importance of these activities to their welfare and well-being. Awareness of ASRH concerns, especially among trained *Sangguniang Kabataan* officials proved to be rewarding because they not only gained ASRH knowledge and skills but also made such learning accessible to their constituents. Efforts to improve awareness of HIV/AIDS have enhanced the skills of *Sangguniang Kabataan* officials in terms of public speaking, radio broadcasting and interpersonal development. Their involvement in capacity-building activities proved useful in situations that made them deal with adolescents, public officials, local health personnel and other non-government agencies. Similarly, local officials in the intervention sites are generally aware of ASRH issues and the corresponding interventions needed by their constituents. They support KS' activities through, among others, the passage of resolutions to strengthen on-going ASRH efforts. Further, local officials are in agreement on allocating a budget for ASRH because they believe in what KS' activities have done to improve the knowledge and skills of adolescents in ASRH, including HIV/AIDS. The resolutions, however, urgently need to be made into ordinances to make them fully binding and to compel local governments to continue their support and sustain the efforts of Kartada Samar beyond project life.

This study recommends the following: (i) strengthen SGD activities; (ii) strengthen HIV/AIDS education campaigns, with special emphasis on STI and HIV/AIDS prevention measures; (iii) strengthen collaboration between the YAS, PSPI staff, KS members, and adolescents in the community; (iv) institutionalize participatory approaches employed in designing, implementing, monitoring and evaluating KS' efforts; (v) continue to encourage the passage of resolutions in support of ASRH efforts for sustainability purposes; and (vi) sustain ASRH services in RHUs, particularly in far-flung areas.

Prevalence of RTIs/STIs among Married Adolescent Women in India

Diwakar Das

Tata Institute of Social Sciences, Mumbai, India

E-mail address: diwakardas2006@gmail.com

RTIs/STIs are a common problem among married adolescent women in India. The objective of this study was to assess the knowledge, and prevalence of RTIs/STIs as well as treatment seeking behaviour for RTIs/STIs among married adolescent women in India. The study attempts to look into various factors that contribute to RTIs/STIs among married adolescent women (age 15-19 years) and their risk of exposure to these infections.

Data for the study were taken from DLHS-RCH SURVEY-II Reproductive and Child Health Project (IIPS, 2006). Statistical analysis was performed using SPSS. Bivariate tables were prepared with respect to percentage of awareness and prevalence of RTIs/STIs according to background variables. Logistic regression analysis was applied to find out the probability of a woman being exposed to the risk of RTIs/STIs according to background variables.

Prevalence and treatment seeking behaviour among adolescent women, was examined by categorizing reproductive tract infections into upper tract infections and lower tract infections. It is evident from the results that knowledge about RTIs/STIs is much higher among literate adolescent women (41%) compared to illiterate adolescent women (33%). There were no rural-urban differentials in knowledge, and 79% of married adolescents reported that they had heard about RTIs/STIs through friends and relatives. Findings also revealed that there is a high prevalence of upper tract infections, lower tract infections and any RT/ST infection among adolescent women. Prevalence of RTIs/STIs was highest in the western region (41%) of India and lowest in the southern region (14%). To conclude, upper tract infections are highly prevalent among adolescent women; their treatment seeking behaviour is also very low; only 20% of married adolescent women in India sought treatment for RTIs/STIs.

Gynaecological Complications and Treatment-Seeking among Young Married Women in Rural West Bengal

Sudeshna Ghosh¹ and Subrata Lahiri²

¹ORG (I) Pvt Ltd ²International Institute for Population Sciences (IIPS), Mumbai, India

E-mail address: ¹ sudeshna27@gmail.com

Marriage brings remarkable changes in the lives of adolescents. Early marriage places adolescent girls at higher risk of sexually transmitted diseases. Generally, women with self-reported symptoms of reproductive morbidity do not seek treatment due to existing taboos and inhibitions regarding sexual and reproductive health. Even if they do so, the majority of women seek treatment from quacks or unqualified private practitioners, a practice that can have serious implications for their health. Untreated infections often lead to pelvic inflammatory disease, ectopic pregnancy, infertility, cervical cancer as well as foetal loss, health problems of the newborn and increased risk of HIV transmission. In addition to health consequences, women experience social consequences in terms of emotional distress related to gynaecological morbidity.

The present paper examines the gynaecological complications, their determinants and treatment-seeking among young married women of rural West Bengal. Multi-stage sampling technique was used to cover a sample of 654 married women, aged 13-24 years, in rural West Bengal, India. The study used both quantitative and qualitative techniques. Bivariate and multivariate techniques were applied for the analysis using SPSS 15 and STATA 10.0 packages. The study was supported by Parkes Foundation, UK.

Findings indicated that the mean age at menarche was 12.9. The respondents reported that they believed in observing certain food habits and restrictions during the menstrual period. Menstrual cleanliness (computed on the basis of use of cloth or sanitary napkin, reuse of cloth, and place for drying of menstrual cloth) was found to be low. About 65% of the young women reported to suffer from any menstrual problem in the last year. Abdominal pain, backache, scanty discharge, passing clots, long cycle (more than 35 days), profuse discharge, long-lasting period (more than 5 days), short-lasting period, short cycle (before 21 days) and mid-cycle spotting were commonly reported symptoms of menstrual illness. Menstrual complications were found to be higher among women who had experienced abortion in their lifetime, had post-delivery complications and were mentally stressed. Treatment seeking for menstrual illness was found to be comparatively lower than treatment-seeking for general illnesses. Among gynaecological problems, white discharge was predominantly reported by young women. Other reported symptoms were pale/yellow discharge with bad odour and itching, pain during sexual intercourse, painful urination, itching over vulva, uterine prolapse, lower abdominal pain (not related to menstruation) and frequent passage of urine. Prevalence of gynaecological problems was found to be higher among non-Hindu women, women with low BMI, those who had experienced spousal violence in the last year, those with experience of post-delivery complications and those who observed poor menstrual cleanliness. Treatment seeking was dominated by home-based remedies, which they believed had a cooling effect to keep away all such problems, followed by ayurvedic remedies and traditional healers/faith healers. Reported reasons for not seeking treatment were "did not think it was necessary", "felt shy and was afraid", poverty and the absence of female physicians.

Probing the Experiences of Unmarried Young Abortion-seekers in Bihar and Jharkhand, India

Shveta Kalyanwala¹, Shireen Jejeebhoy, AJ Francis Xavier, Rajesh Kumar

Population Council, New Delhi, India

¹skalyanwala@popcouncil.org

Unmarried adolescent abortion-seekers constitute a difficult-to-reach but highly vulnerable group; they are more likely than adult women to delay seeking abortion and more likely to seek it from untrained providers. As a result, life threatening complications and subsequent mortality may be disproportionately more likely to occur to unmarried adolescents than to adult women, suggesting the particular vulnerability of unmarried adolescents. Little is known about the abortion-seeking practices of adolescents in India.

The objective of this paper is to probe the experiences of unmarried young abortion-seekers and probe the roles of pregnancy related awareness, partner support and prompt and appropriate care seeking, as expressed in the narratives of those interviewed in depth.

Data are drawn from a facility based study in 16 clinics of an NGO service provider in Bihar and Jharkhand. The study comprised a survey of 549 young women (aged 15-24) who underwent abortion, supplemented by in-depth interviews with 26 of survey respondents. Interviews were conducted prior to discharge from the facility and probed pathways taken by young women in reaching the safe abortion facility, including the timing of recognition of the unintended pregnancy, decision-making, partner and family support, consensuality of the sexual encounter, number of previous attempts made to terminate the pregnancy, lack of awareness of the legality of abortion and so on. In-depth interviews probed these issues in greater depth in order to assess pathways to abortion.

Findings highlight the vulnerability of unmarried young women and the obstacles they face in accessing safe abortion services. Several (18%, including 5 of those interviewed in-depth) reported that the pregnancy resulted from rape or forced sex. Some 17% did not recognize they were pregnant until the second trimester, and one quarter underwent abortion in the second trimester. In-depth interviews reveal that many waited for the “missed period”, were inhibited by feelings of guilt, fear, tension and confusion as well as concern about ruining the family’s reputation. More than three-quarters informed their partner about the pregnancy and over half reported support from their partner. Many fewer informed a family member, most often the mother, but of those who informed a family member, the majority reported that a family member provided emotional/ financial support or accompanied the young woman to the facility. In addition, many made unsuccessful previous attempts to terminate the pregnancy prior to visiting the NGO facility; in in-depth interviews, they describe how they ingested medicine bought from the chemist or unqualified provider by their partner or a family member, thereby further delaying the successful abortion.

While the sample is not representative of all unmarried adolescent abortion seekers, findings, and especially, the rich qualitative data available, highlight the extreme vulnerability of this group. Such findings as delayed recognition of pregnancy, delayed termination, multiple attempts at abortion, lack of support and lack of awareness of an appropriate facility call for wide ranging sexuality education programmes that inform the unmarried about links between a missed period and pregnancy, the importance of early pregnancy termination and the fact that the unmarried are legally entitled to obtain pregnancy termination services.

**STI/HIV Health Treatment Behaviour:
Evidence from the 2009/10 Greater Jakarta Transition to Adulthood Survey**

Iwu Dwisetyani Utomo, Terence Hull, Peter McDonald and Anna Reimondos

Australian Demographic and Social Research Institute

Australian National University, Canberra, Australia

Email address: Iwu. Utomo@anu.edu.au

In this paper, young adults are defined as persons aged 20 to 34 years. The authors have recently completed a statistical sample of 3006 young people aged 20-34 years in Jakarta, Bekasi and Tangerang, the *2009/2010 Greater Jakarta Transition to Adulthood Survey*. This study, the first comprehensive survey of transition to adulthood conducted in Indonesia, was funded by the Australian Research Council, WHO, and the National University of Singapore. Questions relating to sexuality and risk-taking behaviours were asked using a self-administered questionnaire to ensure confidentiality. The objective of this paper is to examine sexual behaviours, knowledge and source of information on STI/HIV/AIDS, and health-seeking behaviour relating to STI/HIV.

Preliminary results showed that 11% of never married respondents and around 10% of ever married respondents had had premarital sex. Among the never married, only 5% of females had experience of sex, compared to 16% of males. Though the authors speculate that the incidence of premarital sex among respondents can be under reported, it is higher compared to the 2007 Indonesian Young Adults Reproductive Health Survey (6.4% among males and 1.3% among females). Self-masturbation and oral sex were significantly higher among males, though almost one-third of male and one-third of female respondents had experienced masturbation with a partner.

Though 15.4% of respondents had not heard of HIV/AIDS, levels of knowledge about HIV/AIDS were higher among the younger cohorts, and among males. In this regard, educational level was also a very important determinant. Whereas one-third (33%) of those with primary school or less had never heard of HIV/AIDS, the corresponding figure was only 7% for those with a Bachelor's degree or higher education. Seventeen percent of the respondents knew someone with HIV/AIDS, while 76 respondents had ever been tested for it, and 6 respondents had tested positive. Knowledge that HIV can be transmitted by sexual intercourse without using a condom, from sharing needles and from blood transfusions was quite high (~79-84%). However, for activities such as kissing, sharing food utensils, from mosquito bites etc there was some degree of confusion with a significant percentage believing that these were ways by which HIV is transmitted, and also a high percentage saying that they 'did not know'.

**Family Systems, Political Systems, and Asia's 'Missing Girls':
The Construction of Son Preference and its Unravelling**

Monica Das Gupta

World Bank, Washington DC, USA

E-mail address: mdasgupta@gmail.com

Son preference is known to be found in certain types of cultures, that is patrilineal cultures. But what explains the fact that China, South Korea, and Northwest India manifest such extreme child sex ratios compared with other patrilineal societies? This paper argues that what makes these societies unique is that their pre-modern political and administrative systems used patrilineages to organize and administer their citizens. The interplay of culture, state, and political processes generated uniquely rigid patrilineality and son preference. The paper also argues that the advent of the modern state in these settings has unraveled the underpinnings of the rigid patrilineal rules, and unleashed a variety of forces that reduce son preference. Firstly, the modern state has powerful tools for incorporating and managing its citizenry, rendering patrilineages a threat rather than an asset for the state. Secondly, the modern state has brought in political, social, and legal reforms aimed to challenge traditional social hierarchies, including the age and gender hierarchies of the kinship system. Thirdly, industrialization and urbanization have ushered in new modes of social organization, which reduce the hold of clans and lineages. Studies of the impact of the media suggest that states can accelerate the resultant decline in son preference, through media efforts to help parents perceive that daughters can now be as valuable as sons.

Birth Masculinity in China: Socioeconomic Differentials and Transition Processes

Christophe Z Guilmoto¹ and Qiang Ren²

¹IRD-CEPED, Paris, France;

²Institute of Population Research, Peking University, Beijing, P.R. China

e-mail address: ¹guilmoto@ird.fr

The upward trends in sex ratio at birth (SRB) observed since the 1980s in several Asian countries correspond to one of the most blatant manifestations of gender bias in demographic systems in existence (Croll 2000; Miller 2001). It is therefore of major importance to monitor and understand the current process of demographic masculinization, in order to gauge the duration and the intensity of the potential sex ratio crisis. Analysis of SRB levels and differentials across affected countries such as China, India and South Korea has stressed several associated factors such as regional patterning, differences between religious or ethnic groups, and the effect of high parity. Comparatively, the link with socio-economic conditions has less often examined. The objective of this paper is to examine how far indicators of socio-economic status (SES) in China, in a context where economic progress has proceeded at a spectacular pace over the past two decades, may be related to gender preferences and attitudes as revealed by levels of sex ratio at birth. To this end, this paper offers the first attempt to simultaneously model SRB variations from aggregated statistics and from individual sample data in China. Previous research has so far been limited to a review of census tabulations, which notably limits the analysis of SRB variations to provincial administrative units. In contrast, this study will test the association between high SRB and lesser-known characteristics of mothers and their households, and explore in greater depth the nature of the link between birth masculinity and socio-economic status. Combining the use of the sub-regional 2000 data with a sub-sample from the 1% survey conducted in 2005, we will simultaneously model SRB variations over both scales in order to highlight commonalities between both models and to detail the complex role played by SES indicators in charting the course of sex ratio transition. The linear and loglinear analyses used for each sample indicate that this pattern persists after the introduction of several other covariates of birth masculinity such as ethnicity, fertility policy, migration status, age or parity. Our results indirectly confirm the turnaround in SRB levels observed in China and suggest that further economic advances and socio-economic mobility may accelerate a return to normal. However, a similar analysis based on recent Indian data indicates that high socio-economic status, on the contrary, tends to aggravate birth imbalances. The paper concludes with a discussion of the transitional nature of the adverse sex ratio in Asia and its policy implications.

High Level of Sex Ratio at Birth in the Caucasus — A Persistent Phenomenon?

Géraldine Duthé¹, France Meslé¹, Jacques Vallin¹, Irina Badurashvili² and Karine Kuyumjyan³

¹ Institut National d'Études Démographiques (INED), Paris, France;

² Georgian Centre of Population Research, Tbilisi, Georgia;

³ National Statistical Service of the Republic of Armenia, Yerevan, Armenia

Email address: geraldine.duthe@ined.fr

During the 1990s, sex ratio at birth increased considerably in the three Caucasian countries of Armenia, Azerbaijan and Georgia. In 2000, it ranged from 1.15 (Azerbaijan) to 1.20 (Armenia), and in the most recent years, levels have remained abnormally high in all the three countries. There are different possible explanations for this increase. It may be due to a deterioration of birth registration that would affect more girls than boys but it could also be related to the expansion of selective abortion in favour of males. On the basis of previous Georgian and Armenian fertility surveys, preliminary research has clearly demonstrated the reality of the phenomenon. Patterns in parity progression ratio showed significant preference for males and special analysis of some questions provided indirect evidence that selective abortion appeared to be the way to obtain children of the desired sex. It was also clear that most of the global effect is due to the third birth. The aim of this paper is to analyze new available data from recent surveys (2005 DHS in Armenia, 2006 DHS in Azerbaijan and 2005 RHS in Georgia) in order to enlarge the first analyses, and to extend them to Azerbaijan. The results should help national authorities to become aware of this worrying phenomenon.

**Why and How Son Preference has Reduced:
A Field Study in Three Villages of Henan Province in China, 2009**

Wang Lei¹, Mu Guangzong² and Guan Xinping³

¹Institute of Population and Labor Economics, Chinese Academy of Social Sciences
Email address: wang-lei@cass.org.cn

In the mid-1990s, research carried out by Chinese American scholars had already found that son preference was becoming weak since the 1980s with the implementation of the open and reform policy in rural areas of Hebei Province of China. In order to understand the reasons and mechanism of weakening son preference, a field study was conducted in rural areas of Henan Province, in December 2009. Henan Province, a neighbor to Hebei Province, is the most ancient area dating back to 3000 B.C., and holds great significance in Chinese history and culture. As a result, the childbearing notions of peasants in Henan Province can stand for traditional childbearing notions of Chinese peasants and compared with those of peasants in Hebei Province.

Three geographically different villages were selected for the study: a plain one, a hilly one and a mountainous one. Three main findings were obtained. First, restricted by China's fertility policy, the three villages, irrespective of their geographical condition, showed a similar weakening of son preference. Second, while traditional cultural power says that they must have a son, due to cost considerations, most couples have only one son. Third, as the benefits received from sons decrease, and daughters contribute more and more to their parents. The desire for daughters increases notably.

To sum up, restricted by the fertility policy and the cost of raising children, including educating and getting them married, the childbearing notions of peasants are affected by both rational calculation and cultural beliefs. In a word, although son preference is weakening and daughter preference is growing stronger, son preference is still strong as the social, economic and cultural conditions in rural China and "one son and one daughter" is the most popular fertility desire of peasants in the three study villages.

Investigating Causes of Neonatal Deaths by Verbal Autopsy in Uttarakhand, India

Rajiv Ranjan

Karnataka Health Promotion Trust (KHPT), Bengaluru, India

E-mail address: rranjaniips@yahoo.com

This study attempts to examine the antenatal, natal and postnatal care patterns of the index pregnancy, to understand the medical causes of neonatal deaths and care seeking behaviour. Data used for the study are from a survey of infant mortality and causes of infant death conducted by ITAP, which provided recommendations to the Government of Uttarakhand for addressing infant deaths in the state.

The study was conducted in three districts of Uttarakhand selected from three distinct zones of the state as per the altitude. One district each was selected from the upper and middle Himalaya regions and one district from the plain area. Verbal autopsies for neonatal deaths were conducted using standard tools and by visiting households. A total of 279 cases were studied for neonatal deaths identified by an NGO, ASHA.

Findings show that about half of the women (below 25 years of age, belonged to the major high-risk section; one-third of neonatal deaths were to first-order births, one-fifth of women had delivered their child before 37 weeks of pregnancy, and 7% of neonatal deaths were reported to have occurred of post-maturity. More than half of the neonatal cases had delivered at home, one-third of the mothers had not received any ANC and more than 80% had not been visited for PNC. Among reasons for neonatal death were birth asphyxia reported in about one-fifth of the cases,, pre-term birth and septicemia in another one-fifth cases, and congenital anomalies in one-tenth of the cases. Findings further reveal that significant number of neonate deaths occur in the state because simple interventions do not reach those who are most in need. Further, coverage of interventions is low, progress in scaling up is slow, and inequity is high especially for skilled clinical interventions. There is no single solution to save the lives of infants. To scale up maternal health and neonatal care, interlinked processes are required: vital systematic and epidemiological statistics, an effective decision-making process, and functional and appropriate participatory approaches. Our study also shows that a large proportion of women reported that infants died because no facility was available. Thus, our findings point to the need for policy level interventions which can help the state to reduce neonatal deaths and support parents to get better health care services for their infants. These interventions are not new but if government incorporates these changes at policy level it will give more flexibility to implementers.

To conclude, the significant number of neonatal deaths in Uttarakhand, highlight the urgent need to improve coverage of institutional deliveries and ensure emergency obstetric care, and health interventions to improve essential neonatal care, and care seeking behavior. Study recommendations include improvements in the village based health system for early identification and timely referral of high-risk cases and ensuring the availability of affordable and quality health services to treat such cases.

Does the Place of Birth Matter? Spatial Analysis of Infant and Under-five Mortality Rates in India

Ankush Agrawal

Indira Gandhi Institute of Development Research, Mumbai, India

E-mail address: ankush@igidr.ac.in

Reducing infant and under-five mortality rates is an integral part of poverty reduction strategies in the developing countries as envisaged in the Millennium Development Goals. In the above context, this study seeks to understand the socioeconomic correlates of infant and under-five mortality rates in India using a spatial econometric framework. We examine spatial dependence in these dimensions of health at the levels of NSS-regions and census-districts and find significant spatial correlation both at the national and local level. This means that both the global and local environment influences these mortality rates. We identify Assam-East as a spatial outlier. Besides, there exist several hot- and cold-spots in the country and we also identify them. The study further examines determinants of under-five mortality using spatial regression models. Spatial dependence is modeled by binary connectivity matrix for the NSS regions whereas the centroid-based definition is used to compute the same at the census-district level. We use both spatial error and spatial lag models. The spatial lag model seems to provide better results than the spatial error model. Contrary to existing evidence, we find that neither female labor force participation nor general level of modernization help in reducing under-five mortality significantly. However, we find the importance of reducing poverty, improving provisioning of public health interventions like antenatal care to women and immunization of children, and educating women significant in this regard. Integrating health awareness with health policy might be helpful in improving health outcomes. A finding important from a methodology point of view is that using the Ordinary Least Square without adjusting for spatial heterogeneity may lead to biased and inefficient estimates of the model parameters.

Multi-level Determinants of Regional Variations in Infant Mortality in India:

A State Level Analysis

Shamindra Nath Roy

Centre for the Study of Regional Development, School of Social Sciences,

Jawaharlal Nehru University, New Delhi, India

Email address: shami3333@gmail.com

A key issue concerning the achievement of human development outcomes in India is the effective reduction of infant and child mortality since regional variations in these indicators are substantially high throughout the country. The identification of effective strategies to reduce infant mortality requires a better understanding of the determinants of infant mortality. The present study attempts to identify the key factors influencing interregional variations of infant mortality in India at different levels of operation, and examines some of the relevant relationships between these factors based on a cross-sectional analysis of NFHS-3 (2005-06) data.

The study uses appropriate bivariate and multivariate (multiple regression model) analyses to determine the gross and net effects, respectively, of selected individual, household and community level factors on infant mortality. A distinction has been made between neonatal and post neonatal mortality to demonstrate that their determinants are different, and that the use of overall infant mortality rate masks some of these important differences.

Findings show that the gross effect of all the individual level factors studied, such as the percentage of women who have obtained all recommended antenatal services, or the index of vaccination, have a higher gross effect on infant deaths, although the net effects of all the factors are lower because many of them are linearly related to the next level, that is household or community level factors. Both gross and net effects of household level factors like mother's empowerment and poverty on infant deaths is very high because many of these factors often control household access to different community level facilities as well as the individual's ability to guard against infant deaths.

The study concludes that the effective interplay of various factors at different levels of childbirth can play a major role in reducing infant mortality.

A Study on the Effects of Social and Demographic Factors on the Health Status and Mortality of Children under Age 5 in Iran

Safiye Mirzaie

Statistical Center of Iran, Tehran, Iran

E-mail address: safyye_mirzaee@yahoo.com

Mortality studies are regarded as one of the substantial topics in the field of demography. Meanwhile, due to its overwhelming impact on the demographic structure of a country, the mortality rate of children aged less than 5 years can be of great significance. The present study is designed to investigate the influence of social, demographic and health factors on health and mortality of children aged less than five years. To this end, the data on the demographic survey implemented in 2000 by the Ministry of Health and Medical Education was used. The survey covered 4000 households in 28 provinces in Iran and provided the data required for the questionnaire in three parts, including data on households, ever married women aged 10 to 49, and children aged less than 5 years. The study investigated 44,683 children under 5 years of age as well as their mothers at the national level. Apart from reviewing the theoretical principles of the mortality rate of children under 5 years of age, the study examines the social, demographic and health features of the statistical society. It also tests the relationship between health and mortality of children aged less than 5 years and social, demographic and health factors through bi-variate and multivariate analyses.

The major results of the study reveal that the health and mortality of children under 5 years of age are affected by the mentioned factors. Also, the analysis of variables pertaining to the health and mortality of children aged less than 5 indicates that the independent variable of parents' education and, in particular, the change in the educational status of the mother from illiterate to primary school, drastically reduces the mortality rate of children under 5 years of age. Finally, the extent to which the independent variables of social, demographic and health factors influence the two dependent variables of health and mortality of children under 5 years of age has been investigated separately.

**The Effects of Rural Parents with Local Off-farm Jobs, Migrant-work
on the Educational Attainment of Their Children**

Guo Lin¹ and Che Shiyi²

Renmin University of China

Email address: nancy8228@yahoo.com.cn

Local off-farm employment and migrant-work of the surplus agricultural labor force is the engine to speed up Chinese urbanization process. With the loosening of China's household registration system and the deregulation of free movement between urban and rural areas, the migration trend of rural labor to urban areas is becoming more and more prominent since the reform and opening to the world. By the end of 2008, there were 225 million migrant workers who came from the countryside but worked in cities. Migrant-work leads to enormous social and economic opportunities and challenges in the inflow and outflow places from the macro perspective, and also leads to a series of effects on the migrant workers' families from the micro perspective.

Although local off-farm employment and migrant-work can increase the family's income and feeling of happiness, it may adversely affect their children's opportunities for educational attainment. As children's educational attainment is the key to achieving intergenerational employment mobility, it is meaningful to study how the factors of family background especially parents' occupational and migratory changes affect the educational opportunities of their children. If the effects are obvious, then by changing parents' occupational and migrant status, children could get better education, the income gap between different classes would be narrowed, and urbanization would be faster and healthier.

The data used in this study are from a survey project, "Gansu Survey of Children and Families (GSCF)", executed by the Northwest Normal University (China), University of Pennsylvania, University of Michigan, University of Minnesota and The Ohio State University. The type of occupation of parents influences their children's educational attainment through economic support, family counseling and parental expectations for their children's education. Three types of parents' occupation were defined: farming at home, local off-farm jobs and migrant-work. The paper mainly studies the impact of parents' occupation types and other family variables on the educational attainment of their children. It concludes that: (1) Although the form and content of the impact of parents' occupation type on their children's education are very different, compared to farming, migrant work and off-farm employment increase financial support to children due to higher family income, and thus, are more conducive to their children's better educational attainment in high school and college; (2) the educational attainment of children is greatly affected by the educational level of parents. In particular, children of mothers who have higher education and are engaged in non-farm work, are subject to higher expectations and more family counseling. Therefore, the government should guide the orderly flow of peasants to cities and towns and, at the same time, speed up the development of rural areas to help farmers to transit to local non-farm employment.

Working Children and their School Attendance in India

Kirti Gaur

International Institute for Population Sciences, Mumbai, India

Email address: kirti.gaur85@gmail.com

Child labor is a global problem and exists in almost all countries of the world. India has the largest number of the world's working children. According to the 2001 Census, 12.6 million children in the 5-14 age group were employed, accounting for 3.14% of the country's total working population. The magnitude of child labour makes it an urgent issue for the millennium agenda, especially in the area of education.

With this perspective in view, this paper attempts to study the phenomenon of child work in India with a focus on the child worker's school attendance, utilizing data from India's third National Family Health Survey (NFHS-3) conducted in 2005-06, and bivariate and multivariate techniques.

Findings show that, in India, nearly one in every eight (11.8%) children aged 5-14 years works. Productive work as well as household chores increase with increase in age which shows that children put in an increasing amount of time on more productive activities as their age increases, or are engaged in household chores to release their parents to work outside the home. Child work in terms of household chores is greater among female children while all other types of work is more common among male children. Further, steep declines were observed in the percentage of working children with increasing education of parents. Steep poor-rich differences are also evident: among child workers: presence of livestock/herds/farm animals and agricultural land increases the proportion of children involved in household chores and other family work. Besides, almost half of the children (aged 12-14) work for more than two hours a day, and are deprived of substantially time from their leisure activities. A negative correlation between child work responsibilities and educational attainment is also evident; most working children enrolled in school are in lower grades according to their age. Moreover, proportions of children who never entered school, left and dropped out are also higher among working children since child work affects regular school attendance and any negative effect is bound to increase drop out rates.; Most working children gave their requirement for work as the reason for not attending school.

Gender Parity Index in education and school life expectancy from the perspective of MDGs in Northern Europe and South Central Asia

Nader Motie Haghshenas¹, Sarreh Hedari and Reyhaneh Golestani

Population Studies and Research Center in Asia and the Pacific, Tehran, Iran

e-mail address: ¹ haghshenas@psrc.ac.ir

The aim of this paper is to highlight and analyze the Gender Parity Index in education and school life expectancy from the perspective of the Millennium Development Goals (MDGs) in South Central Asia and Northern Europe, at the threshold of the 21st century. These regions consist of 15 countries. Data were mostly taken from UNESCO (2008), the official United Nations site for MDG Indicators (2008) and Human Development Report (HDR), the annual report of UNDP for 2007 and 2008.

The Gender Parity Index (GPI) reflects the level of access of females to education compared to that of males. This is calculated for each school phase. A GPI of less than 1 indicates that there are fewer females than males in the formal education system in proportion to the appropriate school-age population. A GPI of more than 1 means that there are proportionately more girls than boys attending school. A score of 1 reflects equal enrolment rates for boys and girls. School Life Expectancy (SLE) is defined as the total number of years of schooling which a child of a certain age can expect to receive in the future, assuming that the probability of his or her being enrolled in school at any particular age is equal to the current enrolment ratio for that age. The study is designed to answer the main question: Do countries with different historical experiences and development levels manifest similar patterns of gender parity in education at the regional level?

According to Goal 2 of MDGs namely, "Achieve Universal Primary Education" and its targets, our results declare that GPI for primary gross enrolment in Northern Europe countries was equal for boys and girls compared to South Central Asia countries. In the majority of South Central Asia countries, the difference in favor of boys had become more noticeable in 2004. Also, we found remarkable changes in GPI in secondary and tertiary gross enrolment and SLE in South Central Asia countries. We can see positive signs of equivalence in education especially in less developed countries in Central Asia, implying a tendency for ongoing convergence at the regional level.

The transition of university graduates in the Philippines to local and international employment

Jeofrey Abalos¹ and Emily Christy Cabegin²

¹Demographic Research and Development Foundation, Quezon City, Philippines

E-mail address: ¹abalosjb@mail.com

This paper aims to examine the transition from schooling to domestic and overseas employment among graduates of education, engineering, and allied medical programmes in the Philippines and how the pattern changes over time. Using the 1991, 1997 and 2006 Labor Force Surveys, multinomial logistic regression is employed to assess the probability of university graduates in the Philippines to be unemployed, work abroad or work locally. Results reveal that some graduates of education, engineering, medical and allied programmes chose not to participate in the labor force; a finding observed to a greater degree among females, particularly among the married. For those who did participate in the labor force, a substantial share of graduates in education, engineering, medical and allied programmes who were looking for work could not find work immediately following their schooling. The transition from schooling to employment is more difficult in recent years compared to the 1990's for graduates in education, engineering, medical and allied programmes, particularly for married females. This is reflected in the substantial share of underutilized labor in the form of unemployment as well as manpower resource among those who choose not to participate in the labor force. As the unemployment rate has worsened for these graduates, so has the incidence of overseas labor migration increased over the years.

Health Policies in Lebanon and their Trends towards Equity

Hala Naufal

Population Studies, Lebanese University

Email address: rzh@inco.com.lb

Following the civil war (1975-1991), the government of Lebanon initiated a massive reconstruction and development of its human and physical capitals. The 1990s witnessed ambitious infrastructure rehabilitation projects as well as the construction of health facilities. Investments in construction, recurrent costs of an oversized public administration and the Government's determination to maintain low inflation rates and a stable currency, led to major budget deficits and the escalation of public debt. By the end of November 2009, the gross public debt reached 50.5 billion USD. Within this context, the predominance of the private sector, a low health insurance coverage of the population (44% in 2007), and a share not exceeding 4% of the total government budget in any year, the Ministry of Public Health (MOPH) has to cover the hospitalization cost of the uninsured population and provide them with expensive treatments that represent catastrophic payments for households. Providing universal and equitable access to health services within the limited financial resources remains the major challenge for health authorities.

This study assesses the general health condition of the population and the characteristics of the health system in Lebanon; examine the components of health sector reform, and assess the achievements and constraints towards ensuring equitable access to health services. It utilizes data from several sample surveys conducted in Lebanon between 1999 and 2007, especially the National Household Health Expenditures and Utilization Survey (1999), the Lebanon Family Health Survey (2004), The Living Conditions of Households in Lebanon (2004 and 2007), and the results of ten studies conducted in the context of the "Community Development Project" in ten Regional Poverty Areas (2005). The paper also reviews the National Strategy for Health Reform and its Plan of Action.

Findings show that several factors have prevented the deterioration of health conditions during the civil war, among which are the active role of NGOs and the private sector, and foreign aid, particularly from international and UN organizations. Maternal health is now an issue of rising concern; maternal deaths occur predominantly among poor women living in remote rural areas. The quality of obstetric services is rather questionable. The health system suffers from many pitfalls: predominance of the private sector over the public sector, focus on curative rather than preventive health care, low health insurance coverage, high cost of the health services, and persisting regional disparities with quality health services being centralized in Beirut and Mount Lebanon.

In conclusion, three health financing reform options were developed. Whereas the Ministry of Public Health failed to reach some objectives, many achievements have been made in other areas towards equitable access to health services. One important characteristic that explains the unlikelihood of achieving comprehensive structural reform in the health sector is the lack of authority of government institutions. The results presented in this paper may be found to be useful by administrators and policy makers.

The Inequality of Maternal and Child Health Care in Urban South and South-East Asia in the Beginning of the 21st Century

Abhishek Kumar and Sanjay K Mohanty

International Institute for Population Sciences, Mumbai, India

Email address: abhi85_iips@rediffmail.com

Although the world's urban population is increasing rapidly, the pace of urbanization is faster in developing countries. Most of these urban populations are from Asian countries. For instance, with respect to size of urban population among the four largest countries in the world (China, Indonesia, USA and India), three are from Asia. As the growth in the urban population of developing countries is faster, it is always used as synonymous with the growth of urban poverty (Wratten, 1995). The rapid pace of urbanization has many adverse impacts on health status and health care utilization in South and South-East Asian countries. The increasing cost of health care services makes health services unaffordable for these poor and marginalized population groups as many of the growing epidemics hit urban centres first and affect the poor the most. As a result, the increasing health inequalities among these groups pose a major challenge to the achievement of the Millennium Development Goals, particularly those related to maternal and child health as existing programmes are often not able to reach the neediest. Therefore, assessment of the coverage of disadvantaged populations under reproductive and child health programmes should receive priority.

Considering this need, this study examines the inequality of maternal and child health care in urban South and South-East Asian countries, using data from the Demographic Health Survey conducted in the first decade of the 21st century. The countries included in the analysis are - Bangladesh, Cambodia, Indonesia, India, Nepal, Pakistan, the Philippines and Vietnam.

As a first step, the estimates of the urban poor have been derived by computing a composite index separately for urban areas by using Principle Component Analysis (PCA) based on economic proxies for the selected countries. The composite index was termed as wealth index and divided into five quintiles where the first and last quintiles were considered as poor and non-poor, respectively. The indicators of maternal and child health care – antenatal care, safe delivery and full immunization of child – were examined by using bivariate, and multivariate and multilevel techniques. Further rich-poor ratio and concentration index were used to understand the gap in utilization of health care services within the group.

Results reveal that although, on average, the urban poor receive better antenatal and delivery care than rural residents, the care of the urban poor is worse than that of the urban non-poor. Multivariate results confirm that controlling for other factors, economic status of household is a significant predictor of outcome variables. This suggests that the urban bias in the allocation of health services does not benefit the urban poor as much as the non-poor. Multilevel analyses reveal significant variations in maternal and child health in urban areas across the countries. In some countries, the urban poor tend to be even worse off than rural residents, suggesting that the urban poor have benefited the least in terms of maternal and child health care.

Out-of-pocket Expenditure for the Treatment of Major Morbidities among the Elderly in India

Akansha Singh

International Institute for Population Sciences, Mumbai, India
Email address: akansha_tanu2002@yahoo.com

Longevity has increased significantly during the last few decades mainly due to socioeconomic development and improvement in healthcare. As a result, Expenditure on treatment of morbidities is also likely to increase with the ageing of population. High healthcare costs in an environment where out-of-pocket spending is common, can be catastrophic; in fact, households in many low-income countries with limited public healthcare options are trapped by unwarranted high out-of-pocket healthcare expenditure. Hence, identifying factors associated with expenditures incurred for treating major morbidities is a growing concern especially for the elderly have limited resources.

The main objectives of the study are to obtain mean out-of-pocket expenditure for treatment of major morbidities among the elderly in India, and to study the determinants of out-of-pocket expenditure at the state, household and individual level.

Data used for the study were taken from the India Human Development Survey (IHDS) conducted in 2005, jointly conducted by the University of Maryland, USA, and the National Council of Applied Economic Research (NCAER), India, and from National Health Accounts. Data on the morbidity status of individual household members, treatment behavior, public-private sector affiliation of healthcare providers, and cash payment for medicines, surgery, healthcare appliances, inpatient boarding and transportation were collected from the IHDS. The reference period for major morbidities was one year prior to the date of survey. An elderly person is defined as a person aged 60 or more. The data were structured in a hierarchical manner, with individuals clustering within households and households within states. The multilevel approach allows entangling of the hierarchical data induced by the sampling design adopted in IHDS. A three-level random effect model which has provision to assimilate variation in out-of-pocket expenditure by states was adopted considering individuals, households and states as the innermost to outermost levels in the hierarchy of analysis.

Results of bivariate analysis show that at the household level, the mean cost of treatment increases with an increase in household income. An elderly person residing in an urban household pays a higher amount of money for treatment. At the individual level, treatment costs vary with age, duration of stay in the hospital, and multiple morbidities. Sex differentials also subsist the mean cost of treatment in that an elderly female pays a lesser amount of money for treatment. Hence, it will be interesting to further explore the role of different factors in explaining variations in the cost of treatment.

**Influences of Rural-Urban Migration and Socio-economic Well Being
on Infectious Disease Mortality in Nang Rong, Thailand**

Yothin Sawangdee, Teeranoot Kornkaew and Piyawat Katewongsa
Institute for Population and Social Research, Mahidol University, Thailand

This study examines the effect of migration and social and economic well-being on probabilities of dying due to infectious diseases using longitudinal data from the Nang Rong Project, Thailand, in 1984, 1994 and 2000. Cause of death was measured by verbal autopsy and visual assessment of infectious disease. Results from Cox's proportional hazard model show that controlling for age, gender and marital status, a number of indicators, namely, type of occupation, education level, household wealth, household density, and migration history of individual, and community health development affected probabilities of dying due to infectious diseases. Further, those who migrate frequently were more likely to die due to an infectious disease. Differences in social class and participation in farm and wage labor also increased chances of death due to this cause as compared with other groups. Likewise, community health development had a negative effect. Thus, it can be affirmed that community health development is able to reduce probabilities of dying due to infectious diseases.

Vital Statistics in Bangladesh: Methodological Issues

Sadananda Mitra¹ and Tandra Majumder²

¹Independent Consultant, Bangladesh

E-mail address: ¹Mitra2kbd@yahoo.com

Sample Vital Registration, among other activities, is an important activity of BBS. Keeping in mind the same objective, that is, to collect, compile and publish demographic data during the inter censal period, the Sample Vital Registration System (SVRS) was introduced in BBS since 1980, with 103 primary sampling units. Since then, it has remained a regular core activity of BBS. Considering the importance of this system, its scope and coverage was expanded over time till 2001. The Integrated Multipurpose Sample (IMPS) design is a two stage stratified cluster design. In the present design, 206,522 households have been covered in 1000 Primary Sampling Units (PSUs). Each PSU contains around 250 households. Salient SVRS issues to improve the quality of the survey are: Though SVRS is conducted based on a sample design (IMPS), in view of the lack of GIS (Geographical Information System) maps it is not clear whether the selected PSUs are properly delineated by the local registrar. Standardization of schedules definitions. Modernization of schedules in the light of the national agenda/goals namely, MDGs, gender (CEDAW); inclusion/ exclusion of schedule or part of schedule. To identify areas to collect sex disaggregated data. Coverage error: - how to identify rare events (births and deaths are gradually becoming rare events). How to accelerate the civil registration system or better coordination of SVRS and civil registration. Quality check: method post enumeration check - ways to improve the quality of data by involving external experts; whether the present estimation procedure is enough (Chandra Sekhar-Deming). The following actions need to be taken to overcome the current issues: Strengthening capacity (human and infrastructure), scale up publicity/motivation on the importance of registering vital events as and when they occur in the sample areas, provide logistic support in the field, and address the need to review the present methodology and collection system.

Re-engineering Vital Events Registration: Learning from Challenges in Haryana, India

Sunil Kumar Gulati IAS

Indian Institute of Technology, New Delhi, India

E-mail address: sunilaol@gmail.com

Civil registration of vital events is a key input from the perspective of citizen centric governance and an indicator of the trust they place in the system. Therefore it is appropriate to study the client's logic of registering births and deaths voluntarily as a key ingredient in determining the levels of civil registration achieved historically, and identify the gaps in the knowledge, attitude and perception of the citizens and state machinery. From this perspective, a case of successful re-engineering of the civil registration system has been identified and examined for Haryana. This paper addresses the question: When the reporting and registration of births and deaths is compulsory and free in India since 1969, why have the client public been shying away from registration of vital events? The issue is, law apart, why should a citizen go in for registration; say a tribal woman or schedule caste person or a poor farmer? Or a slum dweller? The study ventures to take a look at the proximate and ultimate factors that keep people away from compliance, and how social marketing tools could be applied to improve registration. The paper relies on first-hand experience (of the author as Joint Registrar General) of the process of re-engineering of the civil registration system in Haryana, whereby the actual delivery of birth certificates to families, which was only 14% in 2001 rose to 98% in 2008. Based on actual programme implementation policies (of the Health Department), the analysis tries to examine how desired outcomes were achieved. The paper finds that by studying the factors which dissuade people from participation and attending to the needed systemic interventions, the face of the programme could be changed. The crucial change came when civil registration was treated as a service by the bureaucracy and both the supply side and the demand side were taken care of. The proper supply of certificates was ensured by shifting the delivery system from an uninterested police based registration to arousing interest by involving, training and empowering the Anganwadi workers at the cutting edge to collect and ensure delivery of certificates. On the demand side, under the National Birth Certificate Campaign, certificates were distributed free all over the State with a message explaining the potential uses of the same. The paper concludes that social marketing of civil registration as a service made a significant impact on registration levels. The key inputs observed were envisioning the cutting edge functionaries by spirited training from thoroughly trained trainers, and developing and nurturing error free systems that deliver. It also lists the various potential applications of availability of such good registration data on areas such as impact on monitoring child health and sex ratio at birth at village level and how it could have ramifications for the society for policy and governance at large. An effort has been made to list the applicability of the lessons learnt to other government schemes in India including the proposed Multipurpose National Identity Card System (UID) Project.

**Computation of Indicators from the Civil Registration data for the years 2001-2008 in Rajasthan State,
India**

Manoj Kumar Raut¹ and Daliya Sebastian

¹UNFPA

Email address: rautmanojkumar@gmail.com

In India, civil registration was initiated under the Registration of Births and Deaths Act, 1969, to provide reliable estimates of fertility and mortality for the entire country up to the lowest administrative level. However, due to inadequate reporting of civil registration data, the Sample Registration System (SRS) continues to be used to generate these indicators. This paper attempts to compute certain vital indicators using data from the Civil Registration System (CRS) in Rajasthan State for the period 2001-2008. Rajasthan, situated in the northern part of India, is the largest State in India both in terms of geographical area (10.4% of the total area of India) and population (56.5 million or 5.5% of the population of India in 2001). Topographically, deserts constitute more than half of the land mass, where settlements are scattered and population density is low. According to the Population Projections for India and States 2001-2026, the projected population of Rajasthan as on March 1, 2010 is 66.75 million. Its decadal growth rate is 28.41% compared to 21.34% for India (Census 2001).

The paper describes the use of CRS data to compute the major Millennium Development Goal (MDG) indicators for MDG goals 4 and 5 such as infant mortality rate, under-five mortality rate, maternal mortality ratio and other indicators provided certain denominator bases are available every year: sex composition indicators like sex ratio at birth (SRB), fertility Indicators like adolescent fertility rate, number of live births to 1,000 women aged 15-19 (requires denominator of number of women aged 15-19), age specific fertility rates (requires denominator of number of women aged 15-49), total fertility rate (requires denominator of number of women aged 15-49 years), mortality Indicators like age specific death rates as input for life table (requires denominator of age specific population) which, in turn, could be used to compute survival ratios for population projections, under five mortality rate, and life expectancy at birth at the district level, stillbirth rate, neonatal mortality rate, post neonatal mortality rate, maternal mortality rate (requires denominator of number of women aged 15-49) if the reporting level improves. In this paper, the indicators of sex ratio at birth, percentage of institutional births, stillbirth rate, crude birth and death rates, infant mortality rate and maternal mortality ratio have been computed using data from the Civil Registration System and compared with values of the Sample Registration System for the corresponding year.

Since civil registration data are not classified by place of residence, the values obtained are not strictly comparable to SRS figures. Nevertheless, they have been presented here to serve as an indication and that improvements in the system can generate reliable vital rates at the sub-national levels using civil registration data, which is the need of the day for planning purposes, for programme managers and policy makers. It can also be used to generate outcome indicators for MDGs and the goals of Five Year Plans.

**Age-Sex Under-registration of Deaths in Thailand during 2005-2006:
Results from Matching between two Sources of Data**

Patama Vapattanawong

Institute for Population and Social Research, Mahidol University, Thailand

Email address: prpvp@mahidol.ac.th

The problem of under-registration of deaths in Thailand remains although the magnitude of the problem is far less than it was three decades ago. The aim of this study is to estimate the age-sex percentage of death under-registration. The data used for the study were from two sources: the Survey of Population Changes (SPC) 2005-2006, a consecutive multi-round household survey, and the vital registration system. Persons of all ages from the SPC were matched to 2005-2006 death records of vital registration data. Dual records system principles were applied to estimate the extent of death registration which was classified by age and sex using the Chandra Sekar and Deming formula.

Findings indicate that overall incompleteness of death registration during 2005-2006 was 9.0% for males and 8.4% for females. The degree of under-registration decreased when age increased for both male and female deaths. Deaths of males below age 15 showed a higher degree of incompleteness than those of females under 15. From age 15 and onward, percent under-registration of female deaths was higher than that of male deaths. These findings provide useful correcting factors for mortality data.

How Many Children are Available to Take Care of old Chinese People in 2025?

China Population and Development Research Center, Beijing, China

Qin Min

E-mail address: qinmin2002@hotmail.com

Co-residence with at least one son to ensure personal care and financial support has been a predominant pattern among Chinese older persons, which is derived from an inadequate social security system and social norms of filial obligation. However, in the next few decades, every cohort reaching 60 years will have experienced lower fertility than the one preceding it. This raises important questions: How many children will old people have in the future? What are the views and opinions of the elderly and their adult children about family-based old-age support?

The objective of this study was to estimate the number of surviving children of elderly Chinese women in 2025; and to examine the perspectives of both older people and adult children on family-based old-age support in the context of contemporary Chinese society.

Micro and macro simulations of kinship patterns such as SOCSIM and ProFamy require readily-available data which are not available in an updated way. The basic idea of Brant's method is that considering a 50-year-old woman with two children in 2000, if the probability of a young adult dying within 25 years is 0.01, then the probability that the woman will have two surviving children in 2025 is 0.9801 (assuming that deaths are independent), the probability having one surviving child is 0.0198, and the probability of having no surviving children is 0.001. The more complicated probabilities can be calculated using the binomial formula. Essentially, the same calculations can be performed to project numbers of living children for whole cohorts. The calculations for women aged 35-49 in 2000 are made after adjustment of number of children per woman through age-specific fertility rates to take account of the extra births. Numbers of living children for women can be calculated from the Census 2000 and Census 1990. Projected values for population, fertility and mortality were obtained from the United Nations Population Division's online database World 'Population Prospects: The 2008 Revision' (<http://esa.un.org/unpp/p2k0data.asp>). In addition, a qualitative approach used 100 in-depth interviews held separately with elderly individuals and adults with elderly parents.

Findings show that between 2000 and 2025 the number of living children per woman aged 60 and over will shrink dramatically, with large families virtually disappearing, one-child families rising from 5% of the women to 28%, and two-children families rising from 6% to 32%. During in-depth interviews, the majority of respondents stated that one should have at least one child to co-reside with or live in close proximity to elderly parents, especially in the event of an elderly parent becoming infirm. Economic development results in greater independence and overall welfare of the present adult generation. Purchasing care services when necessary instead of receiving entire care from their only one or two children is widely mentioned.

To conclude, demographic conditions for family-based old-age support will become considerably less favorable within 15 years, a finding which contradicts with the traditions reflected in qualitative interviews. This calls for government action and programme activities to strengthen family capacity to take care of old Chinese people.

**Profile of Adult Children Caring for their Elderly Parents in Sri Lanka:
Results from a National Survey**

Truls Ostbye¹, Angelique Chan² and Rahul Malhotra³

¹ Health Services and Systems Research, Duke National University of Singapore Graduate Medical School, Singapore; ² Community and Family Medicine, Duke University, Durham, USA, and ³ National University of Singapore, Singapore
Email address: truls.ostbye@duke-nus.edu.sg

Among South Asian countries, Sri Lanka has the highest proportion of elderly individuals. As its population ages and lives longer, a larger proportion of the elderly will require help and care. Traditionally, for social, cultural, religious and legal reasons, the provision of care to elderly Sri Lankans is considered the responsibility of informal caregivers, especially adult children. However, to date, very little attention has been paid by researchers to explore different facets of elder care by informal caregivers in Sri Lanka.

Against this background, this paper seeks to understand some of these facets. Specifically, it documents the health of adult child caregivers and their elderly parents, the nature of care provided, areas of caregiver concern, factors associated with caregiver stress, and caregiver attitudes towards elder care in Sri Lanka. In particular, it investigates gender differences among caregivers. The Sri Lanka Ageing Survey represents 2,413 elderly individuals selected from 13 of the 25 districts of the country (12 districts were excluded due to ethnic conflict). Adult children (n=381), defining themselves as the elderly parent's primary caregiver, and their elderly parents (n=430) constituted the sample for the analysis. Information on adult children (demographics, employment status, number and relationship to the elderly being cared for, person/s assisting them in caregiving, time spent per day on elder care, nature of care provided and problems faced while providing elder care, self-rated health, perceived worry/stress, history of chronic/acute illness, and attitudes to elder care), and their elderly parents (demographics, history of chronic /acute illness, self-rated health, Activity of Daily Living (ADL) limitation, Instrumental Activity of Daily Living (IADL) limitation and mobility limitation) was collected. Chi-square test or Fisher's exact test (for categorical variables) or Wilcoxon rank-sum test (for continuous variables, not normally distributed) were applied to assess gender differences. Adult child and elderly parent characteristics associated with adult child worry/stress were assessed using logistic regression analysis.

Findings indicated that adult child caregivers spent, on average, 3.77 hours on elder care. Nearly three-fourths reported worry/stress in their daily life, those caring for an elderly parent with IADL limitation [OR=2.25 (1.46-3.47)] and female caregivers [OR=1.86 (1.21-2.86)] were at higher risk. Gender differences were also observed in the type of elder care provided. Most caregivers had favourable attitudes to homebased care, negative attitudes to institutional care, and expected support from their children in old age. Among elderly care recipients, only a third rated their health as excellent/very good, 24% had ADL limitations, and about 45% had IADL and mobility limitations .

To conclude, we observed relatively poor health among elderly parents combined with substantial time required for caregiving and a relatively high level of stress among caregivers in Sri Lanka. Caregiver burden will increasingly become a policy concern given Sri Lanka's ageing population and the predominant expectation that elder care is the responsibility of children.

Intergenerational Care and Support for Elderly: Evidence from Kerala State, India

Daliya Sebastian and T V Sekher

Email address: daliasebastian@gmail.com

Traditionally, the family is the most important institution for supporting the aged in India; even today, a majority of the elderly still live with their families. The families are in transition from joint to nuclear and changes can be observed in both composition and quality of interaction among the members. The generation gap is widening due to fast changing lifestyles, globalization, migration of the young, and the influence of diverse ideologies. There are indications that intergenerational relations are undergoing transition due to social and cultural changes occurring in Indian society. In this context, the present paper attempts to analyze the intergenerational relations and support for the elderly in Kerala State. The main objectives of the study are to understand the expectations of the elderly regarding intergenerational support and their involvement in the decision making process in family matters. The study is based on a survey carried out in Pathanamthitta district of Kerala state. In selected villages, 300 elderly persons were interviewed from the sampled households (184 women and 116 men). Information about their living arrangements, economic dependency, and expectations regarding support from their children during old age etc, was collected. Findings reveal that almost all the elderly expect support in the form of physical and medical care from their children.. About nine out of ten expect financial support and two-thirds expect emotional support from children. Only a little over one-third of the elderly stated that they had been getting the expected support from their children, while about half of them felt that they had received only very limited support. The remaining reported that they are not at all satisfied with the support and care received from their children. Further, about half of the elderly reported that they had received help from their children in times of illness. Elderly women reported to be more deprived of physical, medical, financial and emotional support. With increasing age, the involvement of the elderly in consultations on family matters was found to decrease.. Overall, old age is a vulnerable period and it becomes more so when resources are a constraint. The study reveals that there is a mismatch between the expectations of the elderly and the actual support that they get from their children. This has resulted in tension and conflict in many Indian families.

The Elderly in Humanitarian Emergencies

Malathi Weerasooriya

Independent Consultant, Sri Lanka

E-mail address: malathiw4474@gmail.com

While ageing is a universal phenomenon, the ageing phenomenon is more pronounced in Sri Lanka than in the rest of South Asia. The proportion of population 60 years and over is expected to increase from 10% in 2000 to about 20% in 2025. While it is evident that the early onset of population ageing in Sri Lanka is an inevitable outcome of a positive demographic trend resulting from the decline in fertility and rise in life expectancy, the population ageing issue needs to be looked at from different dimensions.

This paper seeks to analyze the issue of ageing in Sri Lanka from the perspective of interventions during disasters, both natural and manmade, and the consequent emergency interventions and mitigation. During the last five years Sri Lanka witnessed two major humanitarian emergencies, the Tsunami which struck the Island in December 2004 and the large internal displacement of people as a result of the civil conflict. The paper will highlight the challenges faced in the humanitarian interventions with regard to services for the elderly. While it will analyze good practices and lessons learnt through key interviews with government, civil society and UN agencies engaged in humanitarian operations, it will also provide an analysis of the laws and policies that relate to the protection of the elderly and the extent to which these policies address the elderly in disaster responses. In this regard, the role of the Plans of Action that emanated from the World Assemblies on Ageing in advocating for ageing policies at country level and to the extent which these Assemblies have informed country level policies and strategies in addressing the elderly in humanitarian responses will be critically examined.

The paper provides a critical review of the role of the Inter-Agency Standing Committee (IASC) which is the primary mechanism for inter-agency coordination of humanitarian assistance on the elderly. The IASC products such as guidelines, tools and documents endorsed by the IASC Working Group or IASC Principles and used by humanitarian actors in field or policy work have been critically examined in terms of their relevance and the extent to which these tools cover the elderly. In addition, the paper analyzes the specific mandates of key UN agencies such as WHO, UNHCR and UNFPA on humanitarian response and the extent to which these mandates cover the elderly, especially in regard to humanitarian response to the Tsunami and to the humanitarian emergency of the civil conflict. As the life expectancy for women is almost five years more than that for men, the proportion of women in the older age groups in Sri Lanka is higher. Consequently, a large proportion of the oldest of the old in Sri Lanka are widowed women who have no social safety net to rely on. This situation is exacerbated in areas which were under civil conflict. Hence, the paper addresses the gender dimension of the elderly in disaster situations.

Determinants of Age at First Sexual Intercourse among Youth in Nepal

Mukesh Kumar Mishra

E-mail address: call.mishra@gmail.com

The largest youth population in Nepal's demographic history has drawn attention to their behaviour, particularly their sexual behaviour. In this study, youth population is considered as the population in the age group 15-24. This paper attempts to explore the factors that determine sexual behaviours of youth, concentrating on age at entry into sexual union. The effects of background characteristics – place of residence, household income, level of education, ecological zones and caste/ethnicity – of youth on age at entry into sexual union are explored to verify against the hypothesis that background characteristics affect the sexual behaviour of youth. This study examines predictors of sexual behaviours of youth using data from the Nepal Demographic Health Survey 2006. Four logistic regression models each were fitted for males and females for estimating the probability of having sex, or at 15 and 18 years of age by background characteristics. Background characteristics namely, place of residence, level of education, ecological region, caste/ethnicity, and wealth index were used as predictors of sexual behaviour. Findings show that level of education, geographical location and caste/ethnicity have a significant influence on sexual behaviour. However, the effects are not uniform for male and female youth. Geographical location and family characteristics tend to have a strong influence on female but not on male youth. Though education is an important factor influencing sexual behaviour, the effect diminishes with an increase in age at first sexual intercourse. Meanwhile, other factors like caste/ethnicity and geographical region become effective in determining sexual behaviour. Gendered differences in sexual practices are observed implicitly in caste/ethnic groups. For example, Terai Hindu female youth were more likely to initiate sexual activity before or at 18 years than Hill Hindu female youth; in contrast, Terai Hindu male youth were less likely to do so than their Hill counterparts. These marked differences in the sexual behaviours of youth need to be tackled in order to ensure safer sex. Some issues have been raised by this study. Initiating sexual activity at younger ages have several impacts on the lives of youth. It not only hinders their social and economic development but the decreasing synchronization between age at marriage and first sex puts them at risk. If sex is unprotected and premarital, it generates several impediments in their lives: they may be at risk of unwanted pregnancy, risky births and many births. Further, premarital sexual relationships may increase the risk of sexually transmitted diseases including HIV/AIDS. differentials in sexual behaviours also need to be addressed in order to promote healthy practices among youth. Considering that education is an important factor that prevents early sexual practices, especially among female youth, it should be promoted forcefully considering the ecological and caste/ethnic differences.

**Gender Differences in Adolescent Attitudes towards Sex Education:
The Influence of Individual and Family Factors**

Anjula Saraff¹ and H.C. Srivastava²

¹ Stanford University

Email address: asaraff_2000@yahoo.com

This study is based on a sample of 12,635 males and 17,969 females from the National Family Health Survey-3. Never-married men and women aged 15-19 were included in the sample. The study seeks to determine the attitudes of adolescents towards sex education imparted in schools. Binary logistic regression analyses has been conducted to elaborate models for adolescent attitudes towards education regarding various aspects of sexual life. Regression models have been developed to feature individual adolescent characteristics such as age, education, exposure to mass media and work away from home as predictor variables. A second regression model has been developed that includes family and community characteristics such as family structure, type of seen or experienced domestic violence, wealth index, religion and ethnicity. In the final step, regression was conducted on individual, family and community factors. The integrated model is expected to have more explanatory power than either separate model.

Condom Use before Marriage and its Correlates: Evidence from India

Rajib Acharya, Shireen Jejeebhoy and K G Santhya

Population Council, New Delhi, India

Email address: racharya@popcouncil.org

India has a long history of promoting condoms, initially, as part of the family welfare programme and later with the emergence of the HIV epidemic, as part of the HIV/AIDS control programme. Nonetheless, condom use in pre-marital or marital relationships remains limited.¹ Studies that shed light on the factors associated with condom use within pre-marital sexual relationships among young people are practically non-existent in India.

This paper examines, among young people who were sexually experienced before marriage, the extent to which condoms were used in pre-marital relationships and the factors associated with use of condoms. Data are drawn from a sub-nationally representative study of key transitions experienced by youth in six major states of India. The respondents included unmarried women and men and married women aged 15-24 and married men aged 15-29. A total of 50,848 youth were interviewed. Data presented in this paper are restricted to a sub-sample of youth aged 15-24 who were sexually experienced before marriage (821 young women and 1,587 young men).

Findings indicate that where pre-marital sex was experienced, it was by and large unsafe. Of youth who had experienced pre-marital sex, only 7% of young women and 27% of young men had ever used condoms in pre-marital relationships, and 3% and 13%, respectively, had always used a condom.

Two measures of condom use were used in the multivariate analyses: ever use of a condom and consistent condom use. A number of individual, peer-related, relationship-related and community-level correlates of condom use were identified. At the individual level, while schooling was positively associated with condom use for young women, religion was correlated for young men, with Muslim men more likely than Hindu men to have used condoms. Both peer-level factors entered in the analyses — having peers as confidantes and having peers who were sexually experienced before marriage — were directly correlated for young women; among young men, only the latter was significantly associated. None of the parental factors were correlated either for young women or for young men. Both relationship-related variables — age at sexual initiation and type of sexual partner — were significantly correlated for young men; those who initiated sex later were more likely than those who initiated sex earlier, and those who engaged in sex with both romantic and other partners or only with other partners were more likely than those who had sex only with romantic partners, to have ever used condoms. For young women, in contrast, those who engaged in sex with partners other than romantic partners were less likely than those who engaged in sex only with romantic partners to have ever used condoms. Influence of community-level factors was apparent for young men but not young women; young men residing in wealthier settings were more likely than those in poorest settings to have ever used condoms. Most of the correlates of ever use of condoms were associated with consistent condom use as well. Findings call for multi-pronged approaches to reposition the condom as a suitable method for youth.

IIPS and Macro International, 2007. *National Family Health Survey (NFHS-3), 2005-06, India: Volume 1*, Mumbai: IIPS

1

HIV Knowledge and Sexual Risk Behavior of Street Adolescents in Kolkata

Atanu Ghosh¹ and L. Ladusingh²

¹ Institute for Reproductive Health, Georgetown University, Delhi, India;

²International Institute for Population Studies, Mumbai, India

Email address: iipsatanu@gmail.com

This study of 408 street adolescents aged 13-19 years, randomly selected by Time Location Cluster sampling, in Kolkata (India), reveals that 47% had ever had penetrative sex. Among adolescents who ever had sex, two-fifths of the boys reported to be victims of homosexual intercourse whereas 85% of the girls reported to have been raped. The mean age of heterosexual intercourse for boys and girls was 15 and 13.2 years, respectively. Half of the boys and two-fifths of the girls reported condom use at the last heterosexual intercourse. Nearly half of all respondents reported having a symptom of reproductive tract/sexually transmitted infection. Multivariate analysis showed condom use to be positively associated with educational attainment and accuracy of knowledge about HIV/AIDS. Further, awareness campaigns by NGOs were found to be the most effective tool for communicating information about HIV/AIDS than other means of communication. The study recommends that NGO interventions should be scaled up tenable adolescents to gain accurate knowledge about HIV/AIDS and healthier behaviour.

Socio-economic Correlates of Fertility in Peninsular Malaysia

Adzmel Mahmud¹ and Aminah Abdul Rahman²

National Population and Family Development Board, Kuala Lumpur, Malaysia

Email address: adzmel@lppkn.gov.my

The main aim of this paper is to examine fertility trends and differentials among women in Peninsular Malaysia by selected socioeconomic variables which significantly influence the number of children ever born.

The study is based on the 2004 Malaysian Population and Family Survey (MPFS-4), which is the fourth in the series of fertility and family surveys conducted every ten years, beginning with the World Fertility Survey 1974. Multiple classification analysis was used to relate the mean number of children ever born to selected socioeconomic variables. The explanatory variables tested were ethnicity, place of residence, wife's and husband's educational level, wife's work pattern, husband's occupation and family income.

Findings reveal that the mean number of children ever born has dropped from 4.2 children in 1974 to 3.6 children in 1984, 3.4 children in 1994 and further, to 3.1 in 2004. Further, fertility was highest among Malays, women who reside in the rural areas and the eastern region of Peninsular Malaysia, women with lower educational attainment, women who had never worked, women whose husbands worked in the agricultural sector, and women with a family income less than RM1000 (USD280) a month. Further, socioeconomic variables were found to have affected fertility through intermediate variables such as postponement of marriage and use of contraception. There was an upward trend in age at first marriage from 17.6 years in 1974 to 22.0 years in 2004. Marriage postponement was more pronounced among highly educated Chinese women, followed by Indians and Malays. Likewise, the contraceptive prevalence rate was highest among the Chinese, followed by Indians and Malays. Ethnic differentials in number of children ever born were rather pronounced. In the multivariate context, after adjusting for age and age at first marriage, the differential in the mean number of children ever born among ethnic groups remained discernible. The socioeconomic variables examined, had different effects on the fertility of each ethnic group; 'region' emerged as the most important predictor of Malay fertility, while 'work pattern' and 'family income' were the most important predictors among Chinese and Indian women, respectively.

Based on the present trend, it is highly likely that fertility in Malaysia will reach replacement level in less than ten years. Therefore, there is a need to address the trend in delayed marriages and non-marriage such as sustaining fertility at about replacement level as this will determine, to a large extent, the future course of population growth in Malaysia.

Farm Technology Use and Fertility Transition in Rural Agrarian Settings of Nepal

Prem Bhandari¹ and Dirgha Ghimire²

University of Michigan, Ann Arbor, Michigan, USA

E-mail address: ¹prembh@isr.umich.edu

This study investigates the extent to which household use of modern, labor-saving farm technologies influence fertility transition - numbers of farm births - in poor rural agricultural settings of Nepal. Despite the relatively early onset of fertility transition in many neighboring countries of South-East Asia, the countries of the South Asian continent continue to have a relatively high fertility and low contraceptive prevalence (with the exception of Sri Lanka and parts of Southern India). This persistent high fertility in the South Asia region is somewhat surprising in spite of the longest-standing anti-natalist population policies and programmes (United Nations Population Fund, 1989), and has drawn attention from both academia and policy arenas. Among several explanations, often divided into structural and ideational camps, one string of research suggests the demand for farm labor as the driver of persistently high fertility in rural agricultural settings (Rosenzweig, 1977; Rosenzweig and Evenson, 1975; Stokes and Schutjer, 1984; Stokes et al., 1986; Filmer and Pritchett, 1997; Loughran and Pritchette, 1997). The land-labor demand hypothesis (Stokes and Schutjer, 1984; Stokes et al., 1986) has now been extensively used to explain fertility transitions in such settings (Gajurel 2001; Ghimire and Hoelter, 2007; Ghimire and Axinn, forthcoming). However, it is quite surprising that very little attention has been given to the potential role commercial labor-saving modern farm technologies may have on fertility transition. Here, we utilize the widely applicable but quite neglected demand framework for agricultural households proposed by Rosenzweig (1977). We test the hypothesis that the labor replacement effects of modern farm technologies may lower the number of farm births. We use the unique longitudinal panel data from the Chitwan Valley Family Study (CVFS) collected from a rural agricultural setting of Chitwan Valley, Nepal. This data allows the unique opportunity to link a household's labor-saving input use in 1996 to subsequent fertility behaviors - number of births in the household. The setting is ideal because, first, the data comes from a rural agricultural setting which is experiencing rapid changes towards innovative farming systems (Bhandari 2006). Second, in Nepal and Chitwan in particular, human labor is widely used to perform various farm activities (Bhandari, 2006; Bhandari et al., 1996; Chitrakar, 1990; Filmer and Pritchett, 1997; Karan and Ishii, 1996; Kumar and Hotchkiss, 1988; Loughran and Pritchette, 1997). CVFS provides detailed measures of household farming practices, labor use, farm technology use, and individuals' life histories. Finally, the measure of birth over a period of time comes from the same household collected through a prospective monthly household registration system. The results (OLS regression) provide evidence that the use of modern farm technologies in crop production, particularly the use of tractors, significantly lowered subsequent farm births. Although the effects of the uses of farm implements, chemical fertilizers, and pesticides were statistically not important, the directions were as expected. In addition, the additive effect of these farm inputs was very strong. The results provide important insights of the role of agricultural development programmes associated with inputs use on fertility transition of rural agrarian settings.

Education and the Rising Reproductive Cost of Maintaining Status

Samir K.C.¹ and Vegard Skirbekk²

International Institute for Applied Systems Analysis (IIASA), Vienna, Austria

E-mail address: ¹ skirbekk@iiasa.ac.at

Education leads to postponed and reduced fertility. Education has been found to be associated with later onset of childbearing and lower fertility outcomes around the world (Blossfeld and De Rose 1992; Billari and Piccarreta 200, Kennedy 2004, Jejeebhoy 1995, Konogolo 1985). Education depresses fertility preferences, raises contraceptive use, increases opportunity costs and female autonomy, and helps focus childbearing into the realm of rational decision-making. Studies based on natural experiments and monozygotic twins suggest that school leaving age is causally related to later and lower fertility (Skirbekk et al. 2004, Fort 2005, Christensen et al. 2008).

Education is increasingly important for social status. Striving for social status may be a basic human behaviour, and education has become one of the most common and important status identifiers. One's relative education matters much more than absolute education; it raises life satisfaction, happiness and self-esteem (Clark and Oswald 1996, Solnick and Hemenway 1998). Historically, one's status destination, often known at young ages (as inherited wealth, land and inheritance) often decided one's status outcome. Formal schooling levels were low and women could be relatively highly educated but still graduate before the onset of her reproductive period. With growing education, one needs an increasing number of years in society to have relatively high schooling. Education becomes more important for status, income, occupation, and in terms of attracting a partner (Smits et al. 2000). With growth in education, the time to attain status rises. With increased social mobility, fertility is strongly depressed for those who attain higher education (van Bavel 2006, Rysgaard et al. 1992). Even when additional education provides negative income effects, schooling levels can rise, as evidenced from Norway shows (Hægeland et al. 2001). Educational expansion through status seeking may play an important role.

Attaining social status through education implies increasingly later and lower fertility and this effect becomes stronger over time. Some countries have experienced rapid increases in the school leaving age over recent years, while others have experienced only little educational growth from 1970 to 2000. As average schooling length increases, and large proportions of the population wish to be relatively highly educated, the average school leaving age increases. The educational length required to be among the top educated, say 80th percentile, increases continuously. Hence, the overall increase in educational length and particularly the average age at school leaving among the most educated increase dramatically over time. This self-reinforcing spiral has strong impacts on the timing and outcome of fertility across the world.

The Home Purchase and First Birth in Korea

Hanna Kim

Department of Public Health, The Graduate School,
Seoul National University, Seoul, Korea
Email address: hannakim@snu.ac.kr

In Korea, the high price of housing has become a big burden to young people who want to get married and start childbearing. Previous studies carried out in some countries indicate that home-ownership speeds up family formation. On the other hand, studies from other countries report a negative effect. The purpose of this study is to examine fertility variation among newly marrieds by type of housing tenure and first childbearing. The study uses data from a research project "Causes of Low Fertility and Policy Responses" conducted by the Korea Institute for Health and Social Affairs in 2009. The sample includes 3,115 first-married women aged 20-44, divided into three groups according to marriage cohorts.

Findings suggest that homeownership affects first childbearing of newly married couples either directly or indirectly in each marriage cohort. However, there is no correlation between the way of getting a house and first childbearing, suggesting the appearance of a new possible model in Korea.

Discussion on Sampling and Non-Sampling Error of DHS Surveys in Asia

Subrato Kumar Mondal

Population Foundation of India, Ghaziabad, India

email address: subratom@gmail.com

Demographic and Health Surveys follow a complex sample design involving a very different geographical coverage in terms of population size of different regions of a country, proportion of urban/slum populations, intention to provide special estimates for selected regions/states, and stratification. Sometimes, though oversamples are drawn from some of the larger states/provinces, during sample allocation, proportional-disproportional sample allocation is not strictly followed in the case of states. All Demographic and Health Survey (DHS) reports provide values of design effect and talk about sampling errors for different statistics (proportions and means).

Another component of such large scale surveys is the non-sampling error. Various dimensions of non-sampling errors such as coverage error, non-response, measurement error and processing error need to be seen for different countries. The enormity of large scale surveys makes non-sampling errors a serious issue. Broadly, non-sampling errors can be classified into two categories – ‘errors due to non-observation’ and ‘errors due to observation’ which reflect variance and bias, respectively. Analysis of non-sampling errors will give insights into methodological innovations and quality of data.

This paper attempts to discuss sampling errors and various components of non-sampling errors using DHS data for five countries namely, India, Bangladesh, Nepal, Pakistan and Sri Lanka. DHSs generally use SAS and ISSA software to calculate sampling errors. Both software use the Taylor series linear approximation method to calculate variance estimates. SAS software assumes first-stage sampling with replacement although, in reality, it is often not so as it actually results in a slight overestimate of variance. SAS, on the other hand, captures the cluster approach and post classification scenario more appropriately. However, since most surveys use a multistage stratified design, there is a mismatch between the actual design and appropriate software support. Respective country teams, therefore, need to address the issue. On the other hand, in spite of a sincere attempt to minimize the non-sampling error, all DHS country data show different levels of missing data. Different levels of non-response error or data inconsistency actually reflect cultural variations and the situation in different countries.

This paper throws light on how each country level DHS team can learn from the other and share methodological improvements in large scale surveys in Asia.

The Methods Assessment of Household Consumption Data Quality

Ardi Adji¹ and H. Rachmad

BPS Statistics, Jakarta, Indonesia

Email address: ¹ardiadji@bps.go.id

Household consumption data is the main source of data for poverty and economic growth measurements in developing countries such as Indonesia. This consumption dataset is collected using two different approaches, namely the National Socio-Economic Survey (Susenas) and Gross Domestic Product (GDP) which are conducted by BPS Statistics, Indonesia. Each has its own method and approach. Based on the assessment of both datasets in the 2005-2008 period, found that the national consumption level derived from Susenas data is much lower than that in the GDP dataset. However, the consumption level among provinces/regions fluctuated. The paper assesses the data source methods and presents details of how and why this happens.

**Arguments, Scenarios, and very many Experts:
A New Approach to Long-Range Global Demographic Forecasting**

Bilal Barakat¹, Stuart Basten and Wolfgang Lutz

International Institute for Applied Systems Analysis (IIASA), Austria

Email address: ¹bilal.barakat@oeaw.ac.at

Our aim is to produce projections by age, sex and four levels of educational attainment for most countries in the world up to 2050. Assumptions will be based on the assessment (in electronic form) of large numbers of alternative arguments about the forces driving future change by a global pool of experts and subject to strict peer review. The expert elicitation will follow a transparent, inclusive and strictly argument-based approach to defining the assumptions that enter the projections. Traditionally, in all national or international agencies that produce population projections, the assumptions have been defined by a small group of in-house experts after (in many cases) consulting with selected outside experts. The nature of these consultations tends to vary greatly from country to country and the procedure is usually not transparent for people outside the process. This approach is considered unsatisfactory by a large majority of national statistical offices in the EU themselves. By contrast, the present exercise, taking into account insights from cognitive science and decision analysis, among other disciplines, applies a well structured and fully transparent process in which a large number of experts (hundreds or thousands) are asked to independently assess the validity and relevance of alternative arguments that are relevant for the assumed driving forces of future fertility, mortality, migration and education trends in specific countries. We will present on this novel and ambitious projection methodology, including the results of the piloting and testing of the questionnaire items and weights, as well as preliminary results from expert responses on one of the areas (fertility, mortality, migration, education) and/or from one geographical region (Asian, if available by then). This study is part of a larger project on forecasting societies' adaptive capacity to climate change, funded through a European Research Council Advanced Investigator Grant awarded to Prof. Wolfgang Lutz at the International Institute for Applied Systems Analysis (IIASA) in Laxenburg, Austria.

Women's health is in men's hands": Three Good Reasons for Men to Participate and be involved in Reproductive and Sexual Health Programmes in India

Hemkothang Lungdim

International Institute for Population Studies, Mumbai, India

Email address: lhungdim.hem@iips.net

Using recent data, this paper highlights some compelling evidence on why men must be involved in reproductive and sexual health (RSH) programmes in India. Since 1952, when India launched its population programme, men have never been "involved" in the true sense; except, ironically, as policymakers! Clearly, recent evidences reveal the fact that unless men get involved in the programmes, health status will not improve, population will not stabilize and many mothers and children will continue to die during childbirth. There is no gainsaying the fact that India is a patriarchal society and women have an insignificant role in decision-making. For instance, even the choice of a female contraceptive method is decided by 'the man of the house'.

A careful look at the evidences such as NFHS-3 data (2005-06) underlines the importance of men's involvement to improve women's health. Certainly, women's health is in men's hands'. Besides other evidence, three broad, interrelated areas provide convincing evidence of this: : (1) large numbers of unintended pregnancies and unsafe abortions, (2) desire for a small family among men, and (3) low unmet need and insignificant share of male methods of family planning. Overall, a significant 22% of all births (42% of births in the six large Indian states) are unintended or unplanned, highlighting the extent of unmet need for family planning and safe abortions, a major cause of high maternal mortality. Unintended births also influence the total fertility rate (TFR) and health of children; a substantial proportion (40%) of such births were to poor women who had not availed any antenatal care.

Women have consistently shown a desire for small families. However, this has not been successfully translated into a policy tool, as indicated by low contraceptive use particularly among men, unsafe abortions and maternal deaths. NFHS-3 (2005-06) further shows that female sterilization is still the highest contributor of total contraceptive use; condom use is only 8%). On the other hand, TFR has fallen from 3.4 children per woman in 1992-93 to 2.7 per woman.. Interestingly, most married women and men with two living children do not want more children or prefer to delay a current pregnancy. In 17 states, particularly in the south, west and parts of north India, three-fourths of married women with two children do not want more children, ten states have reached replacement level fertility (1.9 children per woman). Total wanted fertility is much lower than TFR and below replacement level, and declining in 17 states. There is huge scope to further reduce fertility to below replacement levels in most states, including the Empowered Action Group (EAG)/high-focus states. And, the answer lies in 'men's involvement'. Evidently, a somewhat more aggressive policy to involve men can substantially reduce fertility, stabilize population faster and improve the overall health status. Perhaps, it is time to think of 'male fertility clinics' manned by male nurses as health workers and counselors, a need propelled by men's behaviour and their role in gender relationships. Multiple regression indicates no perceptible variation in unplanned births between the poor and non-poor, family structure and education; unplanned births, however, are nearly twice as high in central compared to south India. The odds are four times higher among women with two children and nine times higher among those with three or more children ($p = 0.01$). The unmet need for family planning is substantial despite an increase in contraceptive prevalence (56%); female sterilization accounts for two-thirds and women in the lowest wealth quintile and from scheduled tribes are less likely to use any method.

Clearly, in India, men hold the unenviable position of being the key to the health of women and children besides his own. Evidently, there is a need for a more drastic approach in the family

planning and reproductive health programme with a multipronged strategy to check population and improve health.

Reproductive Health Problems and Treatment Seeking Behaviour among Men in India

Ramesh Chellan

Centre for the Study of Regional Development, School of Social Sciences,
Jawaharlal Nehru University, New Delhi, India
E-mail address: rameshchellan@gmail.com

Reproductive problems are hardly paid adequate attention in the field of research and investigation. The reproductive health status of men in developing countries like India, needs a lot of attention. Therefore, this paper is an attempt to study the prevalence of different types of reproductive health problems and health care seeking among men in India, and to examine the determinants of reproductive health problems and health care seeking behaviour and their socio-economic, demographic and community factors by using data from the District Level Household Survey-Reproductive and Child Health (DLHS-RCH-2), 2002-2004. In order to assess the net effect of socio-economic, demographic and community factors on reproductive health problems and treatment-seeking behaviour, logistic regression model was applied. Findings indicate that 7.8% of respondents reported at least one symptom of a reproductive health problem. Among those who so reported, more than two-fifths took treatment for the problem. Multivariate analysis suggests that men from the central, eastern, north-eastern, and western regions, who belong to minority groups (Muslim and SC/ST), those with a high standard of living, those awareness of RTIs/STIs as also aware of HIV/AIDS, and whose wife had experienced symptoms of RTIs/STIs are significantly more likely to report reproductive health problems. Further, apart from urban and Muslim men, those with a high standard of living, with awareness of RTIs/STIs, with awareness of HIV/AIDS, and having a health facility in the village are more likely to seek treatment for their reproductive health problems.

The Roles of Men in Contraceptive Use in Indonesia

Nai Peng Tey and Ng Yin Mei

University of Malaya, Kuala Lumpur, Malaysia

Email address: teypster@gmail.com

The contraceptive prevalence rate (CPR) in Indonesia increased dramatically from about 5% at the launching of the national family planning programme in 1968 to about 50% by the turn of the century. National statistics show that the two-child family has become the norm. However, contraceptive practice appears to have leveled off in more recent years, and there has even been a decline in the CPR among some groups. There is also evidence of an increase in unmet need for contraception. The stagnation in contraceptive use and the rising trend in unmet need prompted BKKBN, the main coordinating agency in family planning in Indonesia, to call for revitalizing family planning.

Previous studies have examined the socio-economic differentials in contraceptive use and obstacles to family planning in various parts of the world. This paper is based on the analysis of data from the 2007 Indonesian Demographic and Health Survey (IDHS). Besides socio-demographic information, the survey collected information on gender roles, husband-wife communication and decision making, approval of family planning, reasons for non-use, and accessibility and cost of contraceptive methods, for a more detailed analysis of the factors affecting contraceptive use. What are the reasons for the stagnation of CPR in Indonesia? Could it be due to lack of support from males or other obstacles such as the shortage of contraceptive services and supplies in more remote areas? This paper is aimed at examining factors affecting contraceptive use in Indonesia; the variables investigated include place of residence, religion, educational level of women and their husbands, number of children, age, income level and attitudes toward family planning. Men's roles in contraceptive use were analyzed within the multivariate context.

Preliminary analysis of the 2007 IDHS data shows a CPR of about 55%; the level of use is lowest among those with no schooling, the poorest, as well as women with a large family size. Injections are by far the most important method (used by about half of all users), followed by the pill (used by 23%). The use of male methods is rather negligible. Among users, about three-quarters had made a joint decision with their husbands, and only a small proportion mentioned that their husbands were solely responsible for the decision to use a method. Detailed tabulations and logistic regression were run to examine the patterns of use as well as the independent and net effects of relevant factors on contraceptive use. The conclusion section discusses the reasons for the differentials in contraceptive use and policy implications. Measures that may be taken to reduce the gap in contraceptive use among the various sub-groups of the population are discussed.

Family Planning Use among Poor Urban Men in Uttar Pradesh, India

Anurag Mishra¹, Pranita Achyut², Sushmita Mukherjee³, Priya Nanda⁴, Ilene Speizer and David Guilkey

^{1,2,3,4} International Centre for research on Women, New Delhi, India

E-mail address: ¹ amishra@icrw.org

Effective family planning has widespread positive ramifications for the health and well-being of populations; contraceptive use not only decreases unintended pregnancies and reduces infant and maternal mortality and morbidity, but is critical to the achievement of Millennium Development Goals. Men play a vital role in contraceptive use decision making, not only for themselves but for their partners as well. In most families, especially among the poor, men are recognized as heads of households and therefore wield influence on the desired family size and actual contraceptive use. Contraceptive use statistics in India show that though men and women are biological partners in the reproductive process, men lack in overall responsibility for contraceptive use. Ensuring greater male participation in family planning and reproduction has been one of the major thrust areas in the Government of India's Reproductive and Child Health programme. The Urban Reproductive Health Initiative is a multi-country programme targeting the urban poor with the objective to improve contraceptive choice and increase access to high quality, voluntary family planning. The urban poor are socio-economically and physically disadvantaged in access to health services and facilities. They are less educated, less exposed to family planning promotion activities, lack money to spend on family planning and lack access; factors that work as barriers to family planning service use. The URHI programme seeks to address these constraints and improve contraceptive prevalence among the urban poor in Uttar Pradesh India. The Initiative is being evaluated by the Measurement, Learning, and Evaluation (MLE) Project which is identifying the most cost-effective country-level approaches. At baseline (early 2010), representative data from men in four cities of Uttar Pradesh State, India, were collected as part of the MLE project. Data were collected from 1500 currently married men in each city (Allahabad, Agra, Aligarh and Gorakhpur) for a total sample size of 6,000 men. Using structured questionnaires and interviewer-led surveys, men were asked about their fertility desires, awareness of family planning methods, family planning use by them or their partner, and attitudes toward reproductive health decision-making. The survey over-sampled slum residents and also collected measures of consumption and assets; this information has been used to specifically examine family planning use and behavior among urban poor men. The analysis focuses on family planning method mix among urban poor men and their partners (as compared to urban non-poor men and their partners), motivations to use family planning, unmet need for family planning, and reasons for non-use among those men and their partners with an unmet need. Based on the descriptive findings, recommendations for strategies to target men and their partners with a high unmet need have been provided.

**The Socio-economic Circumstance of Acehese People:
Prior to and Post Tsunami Attack**

Sri H. Rachmad, Dendi Handiyatmo, Ardi Adji and Sri M. Sasongko

BPS Statistics, Jakarta, Indonesia

Email address: shrachmat@yahoo.com

This paper aims to compare the socio-economic circumstances of Acehese between the previous and subsequent Tsunami attack which took place on December 26, 2004. The data source for analysis namely, the Aceh Population Census of 2005, the National Labour Force Surveys (*Sakernas*) conducted in 2004, 2005 and 2007, and the National Socio-economic Surveys (*Susenas*) conducted in 2004, 2005 and 2007. SPSS was used for data processing and tabulation of data, panel series data based on the three main data sources. The descriptive method was applied to analyze tabulation data which focused on socio-economic and demographic population characteristics. Both quantitative and qualitative methods were used to describe the phenomenon of disaster impact including problem-solution identification. The results of the study will be used to guide policy-decision makers in term of post disaster rehabilitation and reconstruction. Therefore, the most vulnerable people who become victims of catastrophes, and are in a critical condition and need specific programme assistance will be recognized. Finally, the best programme intervention for problem-solution will be better achieved.

**Characteristics of Ecological Migrants and their Effects
on Ecological Migration Project in Sanjiangyuan Area in China**

Xiangjing Meng

Institute of Population Research, Renmin University, Beijing, China

E-mail address: mengxiangjing@hotmail.com

Sanjiangyuan area is the source of Yangtze River, Yellow River and Lancang River, and is located on the Tibetan Plateau in Qinghai Province in China. It has been called the water tower of China and plays a critical role in water security of these three great rivers. The area of Sanjiangyuan is 31.81...104km² and its total population is 650,000. Most of the residents are Tibetan herdsmen. The environmental situation in Sanjiangyuan is fragile and has become worse in recent years due to climate change and overgrazing. In order to protect the ecological environment of Sanjiangyuan area, Qinghai government conducted an ecological migration project to move the herdsmen out of Sanjiangyuan area since 2005. The government built some villages near cities and towns and moved the herdsmen to live in them. Every migrant family was provided with a standard house with a yard and 6000 yuan subsidy per year for their living, for a period of 10 years. So far, nearly 50,000 herdsmen and their families have moved from the pastoral area and resettled in their new homes. What are the characteristics of the migrants? Are there any differences between migrants and non-migrants? Do these differences have any effect on the migrant efficiency and project goals? How is the migrants' situation now and how can their rights be protected and the migrants helped to settle down in their place of destination? These are the questions this paper wants to answer. The data for this paper mainly came from the field work we did in Sanjiangyuan area in July 2009. We visited some government departments in charge of the Sanjiangyuan ecological migration project in Qinghai from the provincial level to county level to collect basic information and data about the project as well as to learn about its process and the problems faced by the migrants. We also visited 5 resettled villages and conducted a survey of the migrants with a questionnaire and some focus group discussions with migrants and village cadres. This information has been used to compare their situation with that of non-migrants ; the information included age, sex composition, family size, education level, family income, the number of livestock owned and the grassland area they owned before migration. Index of migration differences were used to calculate the differences between variables. Based on the results, measures to improve the migration policy have been discussed, such as how to choose the target migrants, where to resettle them and how to protect their rights and also achieve the goal of environmental protection in Sanjiangyuan area.

Resettling Homeless Victims of Natural Disasters in the Philippines

Gloria Luz Nelson

University of The Philippines, Los Baños, Phillipines

E-mail address: glmnelson2001@yahoo.com.hk

Several thousands of families lost their homes, properties and livelihood in three provinces in the Philippines due to three incidents of natural disaster that occurred in 1991, 2004 and 2006. The eruption of a dormant volcano, Mount Pinatubo in 1991 brought about recurrent lahars flows every rainy season in the province of Pampanga, and almost half a million families had to be resettled. In 2004, a super typhoon named Winnie buried the town of Infanta in Quezon province with 20 cubic meter of mud that eroded from the surrounding mountains; consequently, about 12,000 families were evacuated. In 2006, about 200,000 families from the surrounding municipalities in Mount Mayon, in the province of Albay, suffered from flashfloods as an aftermath of Typhoon Reming that resulted in the loss of lives, houses and property; the majority of the houses was either buried by mudflows or were carried away by the strong current during the height of the floods. The response of the Philippine government and non-governmental organizations (NGOs) to this urgent need is a long process of resettlement. Victims of natural disaster go through various stages. During the onslaught of floods and mud debris, neighbors, friends and relatives who have stronger and elevated houses, provide emergency shelters. Through the intervention of the government and NGOs, arrangements are made for the victims to stay in temporary shelters or evacuation centers like school buildings, gymnasia and stadia. As soon as bunkhouses and tents are available, families are moved to this temporary housing while waiting to be finally awarded permanent housing in resettlement sites. It usually takes an average of 2-5 years before such homeless families are finally resettled. The paper further describes how the resettled families rebuild their lives through cooperation, solidarity and resiliency of community members. In this context, the assistance provided by NGOs was found to be indispensable because of their initiatives in providing sustainable livelihood to alleviate the widespread poverty in the resettlement sites

The Implications of Climate Change for the Urban Poor in Bangladesh

Bruce Caldwell

National Centre for Epidemiology and Population Health,

The Australian National University, Canberra, Australia

Email address: bruce.caldwell@anu.edu.au

Bangladesh has been identified by the IPCC as one of the countries most at risk from the impact of climate change. Concerns include sea level rise, increased salinity, increased catastrophic climate events such as cyclones and flooding, and greater climate variability. The impacts will most directly impact on Bangladesh's rural majority but the consequences are likely to include large-scale migration, some of which may be to other countries, especially neighbouring India but the great majority will be internal, particularly to urban areas. In this, it will exacerbate current trends with heavy rural-urban migration driving rapid-urban growth, particularly in the two largest cities, Dhaka and Chittagong.

This paper focuses on the implications of this migration for the urban poor, both those already there and new migrants. The major difference from the existing migration is that climate change is likely to encourage larger-scale migration, particularly of the destitute. The implications of this will partly depend on the employment prospects of the enlarged migrant populations and partly on the already strained capacity of the cities to cope with the increasing population. Migration to date has been a result of increasing employment opportunities in cities, driven by such external factors as the growing garments industry and the much slower growth of income opportunities in rural areas in combination with rising aspirations driven by education and new communication outlets, for example the programmes broadcast by satellite TV. The danger is that employment opportunities will not grow as they have in the recent past, particularly if climate change severely affects the rural market. Moreover, the ability of cities to absorb potentially massive increases in rural-urban migrants must be questionable given existing strains. Unless major and expensive improvements are made, many of these migrants will end up living in *baste*, the vast and growing illegal slum settlements that already house up to a third of the populations of cities such as Dhaka, where the populations live in what are often squalid and unhealthy living conditions with no urban services such as clean water, sewerage, drainage, garbage collection and even pavements. The areas are often subject to flooding – this being one of the reasons why they were not settled officially. Climate change could significantly worsen these conditions.

Key issues examined in this paper include the origins of the surveyed households in the *baste* and non-*baste* areas, their continuing links with rural areas, their resilience and integration into Dhaka economy and society (education, income and asset base), their environment, and their experience during floods.

In 2000, we conducted surveys of four slum and four non-slum areas in Dhaka. In 2005 we conducted a follow-up survey in three of the slum areas. In both rounds, a quantitative survey and a qualitative survey were conducted. The quantitative surveys asked a broad variety of questions on child health and related issues. The qualitative survey consisted of questions on nine major themes including the impact of the environment on their health. Relevant questions for this paper include ones on origin, reasons for migration, education, income and assets, environmental conditions and experience during the most recent floods.

Gender Issues and Reproductive Health of Women

Radha Aras¹, Irene Vegas² and Neevan D'souza³

Yenepoya Medical College, Yenepoya University, Mangalore, India

E-mail address: ¹ryaras@hotmail.com

Married women in India lack control over decisions related to their sexual behavior due to gender inequities, cultural norms, limited economics and social autonomy.^{1,2} Women face the problem of violence (sexual, physical, economic related) which can leave deep psychological scars and damage their health, including their reproductive and sexual health.^{3,4,5}

This paper attempts to study gender issues among women of reproductive age and to assess prevailing social norms and their relation to reproductive health status. A community based cross-sectional study was conducted to meet this objective. A rapid assessment survey tool was developed. After pilot testing, the survey was conducted with 200 randomly selected women of reproductive age (15 to 45 years) from a lower socio-economic community of Mangalore in Karnataka State.

Findings indicated that religion is associated with women's education ($p < 0.001$) and type of family ($p < 0.001$). The average age at marriage of women was 21 years and average age at first pregnancy was 22.8 years. About 16% of the women gave a history of abortion, and 18.5% had suffered some form of gynecological morbidity; 6.5% of deliveries reported by the women were home deliveries. Findings further showed that family planning was practiced by 57% of the women, and in 52.5% of cases, it was a joint decision (by the husband and wife), in 3.5 % by only the husband and in 2.5% by only the wife. Among those who practiced family planning, 79.8% were Hindu ($p < 0.005$). While 76% of the women reported that they treat their daughters and sons equally, 31% think that every couple must have a son, the reasons being for support, security and to continue their family line. Prior to marriage, 50.5% of the women had no freedom of education. 27.5% reported restrictions on their dressing style, 34.5% were not allowed to go out with friends, and 93.5% said that they could not stay out late. Further, 30.5% of the women were the last to eat food, 38.5% had no freedom to spend money as they wished. 71% received health care when ill but 35% did not get rest during illness. Women were subjected to other restrictions mobility as well; 22.5% of married women were not allowed to go to their parents' place, 46.5% were not free to decide when to have sex with her husband and 41% had no freedom to decide when not to have sex. However, 42.5% of the women were of the opinion that whenever the husband demands sex, she should not refuse. A sizable proportion - 37% reported experience of violence perpetrated by the husband or a family member and 20% to have experienced violence even during pregnancy.

To conclude, socio-cultural norms and upbringing of girl children in India play an important role in the reproductive health of women. Gender issues associated with reproductive behaviour of Indian women need more attention. Hence, community based health education programmes should be encouraged to prevent reproductive morbidity by reducing / eliminating gender based violence and other deleterious practices in the community. The promotion of safe and conducive reproductive health practices by couples is very important for woman's health.

**The Silent Cry: Women's Status and Violence
against Young Married Women by Husbands in Rural Nepal**

Prabhat Lamichhane, Mahesh Puri, Jyotsna Tamang and Bishnu Dulal

Center for Research on Environment Health and Population Activities, Kathmandu, Nepal

Email address: prabhatone@gmail.com

Studies conducted across the world have consistently indicated the existence of violence against women. Despite the increasing number of studies conducted in the field of violence against young married women elsewhere, the subject has received little attention from researchers and policy makers in Nepal. This paper assesses the prevalence of violence among young married women in Nepal. Specifically, it examines factors related to women's status in order to better understand the risk of sexual violence.

A cross-sectional study was conducted in 2009 among 1,296 young married women aged 15-24 years from four major ethnic groups. Bivariate analysis and multivariate logistic regression were used to examine the association between selected risk factors and violence.

More than half of the women (51.9%) reported having experienced some form of violence in their lifetime. One-fourth (25.3%) reported physical violence, nearly half (46.2%) reported sexual violence, and one-fifth (20.8%) reported emotional violence in their lifetime. No or little inter-spousal communication and low autonomy of women significantly increased the odds of violence experience among married women. Surprisingly, education of women was not associated with experience of violence. Our results demonstrate that violence against women commonly occurs among young married women in rural Nepal. Although the Domestic Violence and Punishment Act 2066 has been enacted, equal attention needs to be given to increase women's autonomy and activities that encourage inter-spousal communication and dispel positive attitudes towards wife beating. Furthermore, more research that examines the dynamics of violence perpetrated by husbands is required.

**Gender Ideology of Reproductive Health in China:
Does the Service Providers' Gender Ideology Matter?**

LI Liang¹ and YANG Xue-yan²

¹School of Management, Xi'an Jiaotong University, Xi'an, China;

²Institute for Population and Development Studies, School of Public Policy and Administration, Xi'an
Jiaotong University, Xi'an, China
Email address: liliang7909@126.com

In China, the activities of grassroots service providers in towns and on streets have played a key role in client-centered quality of care (QoC). Thus, it is necessary to analyze the impact of gender ideology of grassroots providers on that of clients. One of the main theoretical explanations of gender ideology involves the exposure-based approach in which individuals develop or change their understanding of the rights and responsibilities of men and women in society when they encounter ideas and situations that resonate with gender equality and equity ideals. This approach emphasizes personal experience, education or socialization. Besides individual background and socialization characteristics, there are many immediate factors that influence gender ideology; for example, the local government. In the public region, government is the most powerful ideology system, which has strong power to make people obey or accept its ideology by direct intervention or moral persuasion.

Data for this study were derived from the survey "Gender Analysis in Counties of China", carried out in 2006 by the Institute for Population and Development Studies of Xi'an Jiaotong University, in conjunction with the Management and Evaluation Group of the National Family Planning/Quality of Care Project. The survey locations were five of the experimental counties of the National Family Planning/Quality of Care Project. The survey included two parts: stratified multistage method was used to select potential clients: 2560 individuals in 25 towns or streets were identified as eligible respondents; and a cluster sampling method was used to select service providers: all 465 service providers in the 25 towns or streets were selected. Firstly, the paper compares the equity extent of gender ideology between the service providers and clients, as measured by the Gender Ideology Scale in Reproductive Health. Secondly, we analyze the impact of providers' gender ideology on that of clients. Employing the clients' individual social characteristics variables as the first level predictor variables, and the town/street-level service providers' gender ideology as the second level predictor variables, we analyze how the service providers' gender ideology impacts the relationships between the clients' individual social characteristics and gender ideology by the hierarchical linear model (GLM).

The results show that the gender ideology in reproductive health of the town/street-level service providers has a positive significant association with that of the clients. The impacts of sex, age and marriage of clients on their individual gender ideology show significant variations in different towns or streets. The improvement of town/street-level service providers' gender ideology in reproductive health reduces the difference in gender ideology between male clients and female clients, the difference between married clients and unmarried clients, and the differences among clients of different ages, which may promote further the gender equality ideology in the society.

Husband-Wife Relationship and Son Preference: A Study of South Asia

Anjula Saraff¹ and Shripad Tuljapurkar²

¹ Stanford University

Email address: asaraff_2000@yahoo.com

Today, Asian countries are emerging as economic superpowers; yet, wealth and economic development have not affected many of their social and cultural traditions. In particular, research has shown that there has been little change in patriarchal customs as basic as son preference which still persists in most countries of Asia. This study investigates whether the characteristics of the husband-wife relationship have an effect on son preference. Specifically, its objectives are: (1) to study husbands' and wives' preference for sons, (2) to examine whether more egalitarian attitudes and spousal relationships diminish the strength of son preference among women and, especially, men, and (3) to determine whether differences in son preference between nations are explained by differences in egalitarian gender attitudes and spousal relationships.

The study uses data from the latest Demographic and Health Surveys (DHS) of three countries of the Indian subcontinent – Bangladesh, India and Nepal. The couple's preferred sex composition of children as measured by (a) the husband's and wife's ideal composition of sons and daughters if they could start a family all over again (used as two separate dependent variables, as well as a combined couple-level variable); (b) desire for additional children, and (c) sex composition of children of women who have completed their fertility, including those who had undergone sterilization. Egalitarianism of the husband-wife relationship was measured by (a) the justification of violence upon one's wife; (b) women's autonomy (whether the woman requires permission to go out for medical advice or treatment for herself, whether the husband opposes the wife using a contraceptive method; whether the wife is justified in refusing to have sex with her husband); (c) whether the use of contraception among couples is a joint decision; and (d) whether the woman has a say in using the money she earns. The study explores the effects of variables separately as well as through a composite index representing the extent of egalitarianism. Data are analyzed using both descriptive and multivariate techniques. To understand the factors that affect son preference, multivariate regression techniques have been applied to analyze the effects of the husband-wife relationship (variables described above) as well as other explanatory variables at the individual and household levels. Regression decomposition techniques have been used to assess whether differences in son preference between regions or the three countries can be explained by differences in spousal relations and the attitudes in which they are embedded.

Preliminary results reveal two key outcomes. They suggest that couples who are in a more egalitarian relationship do not show son preference after controlling for their demographic and socio-economic characteristics, and that men who believe that husbands are justified in beating their wife are more likely to possess son preference. Such inter-country comparisons may help international organizations and governments to come together for introducing interventions and formulating policies so as to bring about desired attitudinal changes among men and women.

The Role of Girls' Schooling in the Transition to Marriage

R Batool Zaidi¹ and Iram Kamran²

^{1,2}Population Council, Islamabad, Pakistan

E-mail address: ¹zaidi.batool@gmail.com

Despite its significant contribution to fertility decline, marriage has been a relatively understudied area in Pakistan, with sparse up-to-date and comprehensive information on marriage patterns, timing, and transactions. At the national level, while several datasets show the patterns and differentials in female age at marriage, little else regarding marriage practices is known beyond that. Though it is widely documented that education raises the age at which women marry, there is a lack of research on how pervasive this correlation is and what other mechanisms exist through which girls' education impacts the transition to marriage. We propose to study the routes through which education raises the age at marriage for girls as well as how education influences the choice of when and whom to marry, the effects (if any) it has on a girl's position in the marriage market, and her role after marriage. Previous research shows that ethnicity has a strong explanatory power in marriage timing in Pakistan. Sathar et al (2008) found the median age at marriage to vary across ethnic groups from a range of 17 to 20. Such a large variation in age at marriage has significant implications for fertility trends, marriage being the marker for the transition to motherhood in Pakistan. Moreover, early marriage influences the level of education and employment and social status of women. We include ethnicity as a cornerstone in our study to assess whether the relationship between education and marriage varies across different cultural/ethnic settings. For our study we conducted 4-6 focus group discussions (FGDs) in six rural communities representing the six main ethnic groups in Pakistan. The (FGDs) comprised questions on: the advantages of girls schooling; how education influences the status of girls at the community, household and individual level; the role education's plays in marriage timing, decisions and expectations; and the impact of education on economic opportunities for girls. In each community, we conducted FGDs with educated girls (age 17-22 and completed 5+ class) with same-aged uneducated girls, with mothers, and male members. For the purpose of this paper, we utilize information on marriage from FGDs with all respondent groups (36 in total) thereby presenting the views of more than 250 people as well as national datasets such as PDHS 2007 and the Adolescent and Youth Survey 2002.

We expect to find that the relationship between education and marriage (even marriage timing) differs hugely across communities. Education does not always raise the age at marriage or improve a girl's position in the marriage market. In certain settings educated girls get married at the same age as their uneducated counterparts and even find it harder to find suitable matches. It is only in settings where the community as a whole attaches value to girls' schooling that the positive effects of education can be seen clearly.

Marriage postponement in Iran: Accounting for socio-economic and cultural change in time and space

Fatemeh Torabi¹ and Angela Baschieri²

¹Department of Demography, Faculty of Social Sciences, University of Tehran; ²Department of Population Studies, Faculty of Epidemiology and Population Health, London School of Hygiene and Tropical Medicine;

E-mail address: ¹fatemeh.torabi@lshtm.ac.uk

Between the mid-1970s and 2000, the mean age at marriage of Iranian women increased by more than three years. During this period, women experienced a notable improvement in their education. However, the opportunity of educational attainment was mainly limited to unmarried women. Previous studies suggest that higher educated women are more likely to experience later marriage in Iran. Therefore, the recent marriage postponement of Iranian women can be explained by increased opportunity costs of marriage resulting from women's limited opportunity for educational attainment after marriage. This paper examines the role of post-marital opportunity of educational attainment in the marriage timing of women being exposed to marriage between the mid-1970s and 2000, after accounting for the contribution of individual- and contextual-level determinants of marriage timing (ethnicity, women's educational attainment, marriage market, and process of development). We apply a discrete time hazards model to the data drawn from the Iran Demographic and Health Survey 2000, and a range of time-varying district-level contextual data from two rounds of censuses. This analytical approach allows us to account for both spatial and temporal changes in the context of transition to first marriage. Consistent with previous findings, the results of this study suggest that women's higher educational attainment reduces the hazards of marriage. However, a greater post-marital opportunity of educational attainment increases women's probability of marriage and this influence is stronger for higher educated women. By reducing the opportunity costs of marriage, the compatibility between educational attainment and marriage prevents marriage delay among women with a more promising social prospect. This finding highlights the role of gender equality in the family sphere in a society where, despite a strong emphasis on marriage, higher educational opportunities for women result in their later marriage.

Factors Affecting Age at Marriage in a Female Deficit Region (Haryana) of India

Sunil Kumar Gulati¹ and Aswini Kumar Nanda²

¹ Indian Institute of Technology, New Delhi, ² Population Research Centre Punjab at CRRID, Chandigarh, India

E-mail address: ¹ sunilaol@gmail.com

Age at first marriage is a critical parameter in demographics. As social, cultural, economic and religious forces work to lower the age at marriage in a female deficit society, understanding such forces within and outside the household opens up avenues for greater demographic planning, expansion of education, female empowerment, and social welfare. Haryana, traditionally being a state having low age at marriage for both sexes, linkages of marriage practices with an unfavourable sex ratio has been an issue of serious concern meriting policy and programme interventions, centred around factors affecting the age at marriage. Hence, understanding the factors affecting age at marriage in a female deficit context can be a catalyst for welfare measures. The primary objective of this paper is to identify factors that affect the age at marriage of both the sexes in Haryana and examine their relevance in diversified settings in view of a consistent decline in the share of female population. For this research, based on primary data, the sampling frame involves 429 respondents (male youth aged 14-35) drawn from urban and rural areas of two (economically) forward and two backward districts in the state of Haryana. Responses obtained through detailed interviews of respondents were analyzed using multivariate analysis. Qualitative analysis was carried out by in-depth interviews of an additional 44 respondents from a wider background. Marriage was found to be undoubtedly a predominant phenomenon in the minds of youth (97.2%). Customarily, marriage has been portrayed to be not between the boy and girl but between the two clans. Customs, illiteracy and safety of girls were the prime reasons for girls being pushed early into marriage. The study indicates that the parents, especially the father, has the key say in marriage of youth, and extra efforts will have to be spent to convince fathers to allow youth to study longer and build up skills needed to earn and then marry. Regression shows that the girl's desired age at marriage depends upon the boy's desired age and perceived age at marriage of girls. It is found that a professional /postgraduate youth has a greater say than the lesser qualified one. By incentivizing delayed marriage and enhancing the legal age at marriage on the one hand, and occupying youth in education and entrepreneurship on the other, if the age of any one partner can be pushed up, the age at marriage of the other will most likely also go up. The aspect of girls' safety can be helped by self-help and women's groups etc who must step in to prevent blowing stray incidents of inter-caste marriages etc. out of proportion and also to motivate girls to study longer for they are safe against early marriage as long as they are studying. The ultimate aim of the programmes should be to raise the self-esteem of boys and girls thus empowering them to take charge of their life and marry only when ready. The strategies identified for this in the paper are economic, technological, social, legal, and political.

Socio-economic Factors and Marriage in Thailand

Sukanya Chongthawonsatid

Bamrasnaradura Infectious Diseases Institute, Bangkok, Thailand

Socio-economic factors contributed to the probability of marriage among women and men. Education and occupation have been linked to a greater choice for women in determining marital status due to social change and gender roles. The aim of this study is to investigate and confirm that socio-economic factors are associated with marriage in Thailand. Census data of 2000 were used and socio-economic factors were studied by using logistic regression analysis. Results showed that age, sex, religion, literacy and work status are related to marriage. Males are less likely to be ever-married than females (by 36.4%). The chances of being ever-married among Muslims increases (by 12%) compared to those who practiced Buddhism. Further, persons who could not read and write are more likely to be ever-married than people who can do so (1.2 times). In terms of work status, the chances of being ever-married decreased by 18.8%, 46% and 34.6% for employers, government employees and private employees, respectively, compared to unpaid family workers. Thus, our findings confirm that socio-economic factors contribute to the feasibility of marriage in Thailand.

Impact of the Demographic Features of Migrant Workers on their Pension Insurance System

Yu Yao

Chinese Academy of Social Sciences, Beijing, P.R. China

Email address: njyaoyu@hotmail.com

The government of China plans to design a special pension system for migrant workers. The demographic characteristics of the migrant workers (refers hereafter to those migrating from China's countryside to towns and cities, are important factors for designing their insurance system because we need to take into account both individual welfare needs as well as the overall needs of migrant workers as a group. This report discusses relevant policies concerning the pension insurance system for migrant workers from the perspective of their life cycle and economic cycle of working in cities and towns. The key problem lies in the estimation of their urban working years because it is due to these golden years that they can pay for the insurance scheme.

In order to calculate migrant workers' expected time of urban employment at various ages for accurate pension estimates, we must note that the uniqueness of the pension insurance system for migrant workers compared to that of ordinary urban workers lies in the difference of the length of urban employment and insurance coverage, as migrant workers do not follow a legal retirement age for exiting the urban labor market. Hence, to make the pension insurance system of real value, we have to study the expected length of employment of urban migrant workers. While the length of employment of urban migrant workers has been reported in many previous studies, few have estimated the expected length of urban employment, and some of these have used ordinary life tables. We believe that using monotonically decreasing tables is highly effective given the fact that migrant workers in China often live and work alternately in urban and rural areas. Therefore, we need to estimate this indicator using multiple increase and decrease life tables. The "increase" and "decrease" in this life table means that there is more than one state of "survival", and various states of "survival" are inter-convertible, and for a certain state of "survival", there is not only a "decrease" in shift to the state of "death" or other states of "survival", but also an "increase" in shift from other states of "survival".

The study employed the mortality rate data from the Fifth National Demographic Census of 2000 for calculating the life expectancy of migrant workers and the household survey data of 2006 obtained from the Rural Survey Team of the National Bureau of Statistics for calculating the length of outside employment. Calculated results were verified by referring to the data of monitoring points set up by the Rural Development and Research Center of the Ministry of Agriculture across China's countryside.

Findings indicate that: the following conclusions: (1) observing expected work time outside at various ages, we find a group of workers which cannot meet the requirement of paying pension insurance premiums for 15 years. Only younger migrant workers (females below 30 and males below 29 years) who do not have urgent pension needs are able to meet this requirement; the inverse proportions are 75.57% and 51.02%, for female and male workers, respectively. (2) There are some migrant workers (17.09% of female migrant workers and 38.78% of male workers) who cannot meet the 15-year payment requirement of both the migrant workers' pension system and the new rural pension system, but they can join a joint programme, if a seam policy is offered. (3) However, there are some migrant workers (7.34% and 10.21% of female and male workers, respectively) who cannot meet the 15-year payment requirement of either system even if a link-up between the two systems is offered. We suggest that policy designers should design different policies for different groups of workers.

Impact of Rural-Urban Out Migration on Child Health: A Study of Child Well Being

Arabinda Acharya and S N Tripathy

Gokhale Institute of Politics and Economics, Pune, India

Email address: aravindaacharya@yahoo.co.in

Worldwide, more than 700 million people migrate every year within their own country. In India, over 30 percent of the population migrates to urban areas in search of a higher standard of living, including better health care and education for their children, leaving their families behind (HDR, 2009). In spite of this, in the present era of economic globalization, trade liberalization, competitive market forces and unequal distribution of resources, there is a growing consensus about the importance of rural-urban migration. The present study attempts to examine the impact of internal migration on child well being in one of the poorest states in India.

Among the states in India, Orissa is one of the poorer states. Orissa's peculiar demographic scenario provides a strong rationale for researchers to make a comprehensive study of its situation. Among its peculiar characteristics are its low fertility (2.38, TFR), combined with the second highest (66) infant mortality rate among the states in India (NFHS-3, 2005-06). Add to that, the child health scenario in Orissa and it makes an alarming picture, with the highest number of infant and child mortality along with widespread malnourishment among children and the largest concentration of poverty. Further, in Orissa, internal migration (rural-urban) plays an important role in livelihood diversification, health transition and economic development which contribute around 6% of remittances in the state. This paper seeks to answer the questions: Does internal migration impact on child health in rural Orissa? Does the flow of remittances from internal migration (rural-urban out-migration) allow the household to increase out-of-pocket health expenditure in Orissa? Is the migrant's household different in terms of child health practices, and receiving health knowledge and health information from that of a non-migrant in rural Orissa.

The study examines the impact of internal rural-urban out-migration on child well being and hence on child health, and whether the migrants' health knowledge and health information makes any improvement in the health status of their (migrant) children.

The study draws inferences using primary data collected in Ganjam district of Orissa, incorporating bivariate and multivariate statistical techniques.

The results of the study reveal that children in migrant households were better off [statistically significant ($P < 0.005$)] in terms of physical and social well being as compared to children in non-migrant households. However, it also found that the mental well being of children in migrant households is adversely affected [statistically significant ($p < 0.001$)] as compared to children in non-migrant households. Further, the study proved that migrant households have more health knowledge and health information compared to non-migrant households [statistically significant ($P < 0.005$)]. Moreover, it observed that increasing the duration of migration has a positive association with child well being and the health status of left-behind family members compared to short duration migrants.

To sum up, the study concludes that increasing migration from rural to urban areas not only strengthens the financial capacity of the sending household but also has the capacity to contribute to improvements in their children's well being and the health status of left-behind family members.

Differentials in sex ratio among Migrants and Non-Migrants in India

Nalin Singh Negi¹ and Babita Sinha²

¹ Indian Institute of Technology Roorkee, India

Email address: negi_nalin@yahoo.co.in

Migrant women easily incorporate the behavioral and cultural values of their place of destination. However, there are diverse views about the impact of a new social environment on the childbearing preferences and behaviours of migrants. The reconstruction of gender relations within the family at the place of destination is a dynamic process in which certain elements brought from the community of origin are discarded, others modified, and still others, reinforced. The association between migration and fertility is well established but its impact on son preference is as yet, unexplored. This paper attempts to underpin the hypothesis that migration has an inverse relationship not only with fertility but also with son preference.

This study is based on a sample of 93,724 ever married women, aged 15-49 years, drawn from India's National Family Health Survey-3 (NFHS-3) conducted in 2005-2006. Migrant women were grouped under six categories namely, urban and rural non-migrants, and urban-to-urban, rural-to-rural, rural-to-urban and rural-to-rural migrants. The sex ratio of children was expressed as the number of female children per thousand male children.

To begin with, a model controlling demographic and socio-economic covariates was framed. Findings outline possible differences between migrants and non-migrants and, provide preliminary evidence about how and to what extent migration shapes the sex ratio of children. They show that most migrant women are rural-to-rural migrants followed by urban-to-urban and then, rural-to-urban. Children born to rural non-migrant women have the highest sex ratio (960) compared to rural-to-urban women migrants (908), suggesting that the rural family living in an urban area endures the impact of the place of destination resulting in a decrease in the sex ratio of children. Two variables, 'number of boys in the family' and 'sex composition of children in the family' were considered as proxy variables for son preference. Preference for sons as depicted by 'more than 2 boys in an ideal family' and 'more boys than girls' is more prevalent among those women who have migrated from rural-to-rural, followed by rural-to-urban areas. Further, son preference, depicted by 'more than 2 boys in an ideal family' and 'more boys than girls' is more prevalent among women who have migrated from rural-to-rural, followed by rural-to-urban areas.

The study has revealed that over the long term, any form of migration leads to a decrease in the sex ratio of children. In every form of migration, the sex ratio of children of migrant women who have lived more than five years in their place of destination is lower than the sex ratio of children of women who have migrated for fewer than five years. Migration changes residential arrangements which may act through distal determinants to influence sex ratio. After controlling for socio-economic and demographic characteristics, rural-to-urban migration tends to decrease the sex ratio of children indicating that the major negative impact on sex ratio is due to rural-to-urban migration.

**Impact of Conjugal Resources on Gender Role Expectation in Division of Housework
on Migrant Rural Women: A Survey in Juchao of Anhui Province**

Li Liang¹ and Yang Xueyan²

¹ Soochow Univeristy, School of Society, Taipei, China;

² Institute for Population and Development Studies, Xi'an Jiaotong University, Xi'an, China

Email address: liliang7909@126.com

In the context of rural female migration for jobs and returning home, there are sophisticated interactive relationships between conjugal resources and individual experience of socialization. Therefore, it is necessary to analyze the moderator effects of migration experience for studying the impact of conjugal resources on the gender role expectations of these rural women with regard to division of housework. In the light of the relative resources explanation, the individual with the most resources (education, earnings) uses those resources to negotiate his/her way out of housework. According to Roman's, Richmond's, Blumberg's and other studies of modified relative resource theory, there is heterogeneity of the resource power effect in different socio-economic and cultural contexts. In the common rural society of China, the effect of traditional gender norms is strong enough to restrict the effect of conjugal resources. However, under the context of rural female migration for jobs, gender norms become more flexible and the spouses' relative resources could be transformed to bargaining power thereby affecting gender role expectations in division of housework.

Data for this study was derived from the survey "Gender Analysis in Counties of China", carried out in 2005 by the Institute for Population and Development Studies of Xi'an Jiaotong University. The survey location, Juchao District of Anhui Province, was chosen specifically for its agricultural economics and high levels of out-migration. A stratified multistage method was used to select potential respondents. Of 620 individuals identified as eligible respondents, 601 completed the survey, a response rate of 97%. This paper selected 237 eligible females, 20 to 49 years old, who were married and had children, based on a study of housework. The paper compares differences in gender role expectation of division of housework between rural women who have migration experience and those who have never migrated. Then we analyze the impact of conjugal resources on gender role expectations in division of housework. Furthermore, we analyze whether the impact varies with rural female migration experience by introducing the moderator variable — migration experience, and analyzing the interaction effect between the experience and conjugal resources.

The results show that women with experience of leaving home for work outside have higher gender role expectations in division of housework than those without such experience. Rural women's income and education have a significant impact on her gender role expectation. The interaction between migration experience and conjugal resources reveals that as the constraint of traditional gender norms weakens, the migration experience strengthens conjugal bonds and results in more equitable gender role expectation. But the experience does not increase women's income.

**The Impact of Rapid Population Ageing on Changing Intergenerational Transfers:
Some Evidence from Japan and other Asian Countries**

Naohiro Ogawa¹, Rikiya Matsukura² and Amonthep Chawla³

^{1,2}Population Research Institute, Nihon University, Tokyo, Japan,

³ Thailand Development Research Institute, Bangkok, Thailand

E-mail address: ¹ogawa.naohiro@nihon-u.ac.jp

The magnitude of the impact of changing age structure on the economy depends on two important economic features that have so far been poorly measured and understood. The first is the economic lifecycle. It is widely appreciated that age structure influences the economy because there are extended periods of economic dependency at the beginning and end of life. However, so far there have been no universally accepted methods for determining how long these periods of dependency last, how the extent of dependency might vary by age, how the lifecycle varies across countries and time, how it is influenced by economic development, etc. The second important economic feature related to age-compositional shifts is the system each society uses to reallocate resources from the ages with an economic surplus to the dependent or deficit ages. Countries rely to varying degrees on three different channels: financial markets, the public sector, and the non-market private sector (especially the family). Countries also differ in economic mechanisms employed to shift resources across age using either transfers or asset-based flows. The mechanisms employed vary depending on the level of economic development, the political system, social structure, public policy, etc. A number of Asian countries are currently experiencing very dramatic changes in their reallocation systems. National Transfer Accounts (NTA) provide a conceptual framework for measuring the economic lifecycle and the reallocation system in a comprehensive manner, and as such, are very useful in terms of filling in the knowledge gap and offering clues for future policies. At present, Japan has the oldest national population in the world, and has aged at the fastest pace among all industrialized nations. No less striking, however, is the rapidity with which some other Asian countries have been undergoing demographic transitions in recent years. As was the case with Japan a few decades ago, these countries are experiencing huge changes in their age structures, and are facing significant policy challenges, particularly in the realm of intergenerational transfers. In this paper, by drawing upon new findings generated from the Japan-NTA project, we will analyze Japan's population ageing and rapidly changing pattern of public and private intergenerational transfers. We shall also examine the impact of rapid population aging upon the role of intergenerational transfers in other Asian participants in the NTA project. Finally, we shall compare Japan's experiences with theirs. Despite fast economic development, Japan still retains some traditional cultural values, which provides us with an opportunity to discuss the relevance of the Japanese case to other Asian countries in their formulation of effective policies on intergenerational transfers. Our findings, we believe, will be particularly useful to those Asian policy makers who are interested in combining the best of traditional and modern values in providing care and support to the elderly in their countries.

Intergenerational relationships in Bangladesh: Evidence, Issues and Challenges

Sharifa Begum

Bangladesh Institute of Development Studies, Dhaka, Bangladesh

E-mail address: sharifa@sdnbd.org

In recent decades, Bangladesh has experienced a significant decline in fertility and mortality leading to substantial age-structural changes in the country. Consequent to all these changes, its population has been going through the ageing process, contributing increasingly larger numbers of the elderly to the total population. As population estimates suggest, the ageing process will advance fast in the coming decades causing a sharp increase in the number of elderly persons in the country; as expected, their number will reach a figure of more than 4 million in 2050 from 0.75 million in 2001, and they will represent about one-fifth of the country's total population in 2050. Obviously, one of the fallouts of this demographic development has been the increase in the number of the elderly in the dependent population, thereby raising the country's elderly burden significantly. For example, there were 11 elderly per 100 working age population in 2001 but this figure is expected to rise to more than 30 per 100 in 2050 (medium variant, UN DESA, 2004). As is well known, the ageing of populations gives rise to many challenges in a society, particularly in the realm of population management strategies, especially those relating to the quality of human life.. In this context, intergenerational relationship has become a salient issue and is gaining renewed importance in developing countries where public institutions providing support for the elderly are hardly in place. Bangladesh, as a country, falls very much in this category; with a cultural heritage of strong filial piety, the support for elderly parents in the country almost solely emanates from children and the family. Unfortunately, the society has been changing following onslaughts from various sources i.e. modernization, urbanization, migration of children, change in values and norms, change in human aspirations, lifestyle etc., which are likely to leave much negative effects on intergenerational relationships particularly from the reverse direction namely, from children to parents, and has great potential to pose a danger to the security provision for elderly parents for whom children are the major and only source of support. Unfortunately, societal changes involving intergenerational relationships have remained largely unknown and unnoticed in Bangladesh, creating a knowledge gap about the situation of the elderly in the country, and this lack of evidence restricts appropriate policy making. The proposed study, therefore, intends to document the changing nature and pattern of the inter-generational relationship in Bangladesh particularly from a direction of children to parents in terms of personal interaction and financial support. It further attempts to understand the nature and extent of vulnerability of the older generation due to changes in the traditional role-relationship and tries to comprehend how these changes are affecting the different groups of the elderly namely, the affluent, poor, women etc. It also aims to understand the dynamics and issues behind these societal changes. The study will use primary information gathered both from the elderly and younger generations.

Age Pattern of Intergenerational Exchanges of Elder Parents in Rural China: A Life Course Perspective

Dongmei Zuo¹, Zheng Wu² and Shuzhuo Li³

^{1,3}School of Public Policy and Administration, Xi'an Jiaotong University, Xi'an, P.R. China; ²Department of Sociology, University of Victoria, Victoria, Canada
Email address: zuodm12@gmail.com

Although research has proved that age is a prominent variable affecting the support exchange behavior between elderly parents and their adult children. It has been confined within the framework of generation which, in turn, is related to groups of people rather than individuals. Besides, most of the studies have used cross-sectional designs. Researchers have paid scant attention to the dynamic of intergenerational exchanges on an individual level. Cross-sectional research designs are useful for displaying the differential distribution of intergenerational exchanges across age groups at one time point, but do not substantiate real-time ageing effects nor do they suggest true life course changes of individuals.

This study adopts the life course theoretical framework and redefines the concept of age on the basis of life time, historical time and family time by which three time-related dynamics, that is chronological age, cohort and life course status, respectively, can be differentiated. It addresses five questions: What is the growth trajectory of intergenerational economic and instrumental exchanges? Are there cohort heterogeneities in these trajectories? How are levels of intergenerational exchanges altered by the life course status of elderly parents and their adult children? Is there a difference between fathers and mothers? Is there a difference between sons and daughters?

Respondents aged 60+ years were drawn from a baseline and three follow-up surveys of "Welfare of Elderly in Anhui Province, China", conducted in 2001 and 2003, 2006 and 2009, respectively. Samples with no children were dropped, giving a working sample of 4,795. Growth curve modeling was applied to predict average levels and rates of changes in economic support and instrument support given to and provided by elder mothers and fathers, respectively, and the effects of age, cohort variations, age-by-cohort interaction and life course status of elderly parents and their adult sons and daughters were simultaneously estimated.

The expected age growth trajectories of intergenerational exchanges and cohort-specific trajectories predicted from the models are depicted empirically and graphically. Although over the past few decades, sociologists and demographers have reinforced the idea that macro structural trends have been destructive to elderly support functions of the traditional family, our findings show that the parent and children continue to engage in mutually supportive exchanges in the extended family in rural China, going beyond the nuclear household. Findings also provide evidence of a genuine decline of intergenerational exchanges over time, although not purely a social, change related phenomenon. Instead, it is strongly individual ageing and family life stage driven. Cohort differences in intergenerational exchanges were substantial. Cohorts do not share the same growth trajectories as they age. With historical social change, the economic welfare of the contemporary elderly has been promoted, but their instrumental care has deteriorated and they bear a heavier burden of providing care for children and grandchildren

than in the past. Further, sons were more closely linked with the lives of elderly parents than daughters. Elderly mothers were more closely linked with the lives of adult children than elder fathers, and social changes affected elder mothers and fathers in different ways.

**Strengths and Weaknesses of Indirect Estimates of Induced Abortion:
Case Studies from Indonesia and Iran**

Meimanat Hosseini Chavoshi and Terence Hull

Australian Demographic and Social Research Institute, Australian National University, Canberra,
Australia

Email address: meimanat.hosseini@anu.edu.au

Fertility reached below-replacement level in Iran by 2005 and is on track to achieve that marker by 2011 in Indonesia. Unintended pregnancies are still common in both countries, representing one-third of conceptions. While later marriage has become common in both countries, the main determinants of low fertility are use of effective contraception and intentional termination of pregnancy. Modern contraceptive prevalence among eligible couples has stalled at the level of about 55 to 60 percent for a decade. Various estimates put the annual number of abortions in Iran at about 80,000 and in Indonesia, at about 1.2 million. Legally induced abortion is only permitted when the mother's life is in danger, or there is a foetal abnormality. However, most abortions sought by women involve intentional termination of unwanted or mistimed pregnancies and, as such, are technically illegal. The aim of this study is to ascertain the effect of age at marriage, insusceptibility, contraceptive use and abortion on the current level of fertility in association with socio-demographic differentials. Data from Iran rely on the 2000 Iran DHS, 2005 IMES and 2006 Census, and for Indonesia the 1991, 1994, 1997, 2002/3 and 2007 DHS, the 2000 Census and routine socio-economic surveys. These data are used to investigate the pattern and levels of fertility determinants using the Bongaarts model to calculate indirect estimates of the incidence of induced abortions.

Incidence of abortion increases with education and with the development level of the region. More educated women, particularly those in large cities or more advanced provinces are more likely to use traditional methods of contraception and to avoid hormonal methods. Subsequent contraceptive failure then leads to abortion, and this analysis indicates the close relationship of abortion to patterns of contraceptive usage. However, contraceptive usage shares a substantial part of fertility decline in both Indonesia and Iran.

Small Area Estimation Procedures: Scope of Application in Demography

K. Srinivasan

Institute for Social and Economic Change, Bangalore

Email address: ksrini_02@yahoo.com

There are two fundamental differences between the indirect technique of estimation of demographic parameters used in demography and the “Small Area Estimation” methods developed during the past two decades by statisticians, and now extensively used in developed countries to get county level estimates when the surveys are planned to get estimates with a given level of precision at higher levels, state or country.

The indirect methods used in demography are *algebraic methods* that were developed in the ‘sixties’ because of paucity of reliable data, to get direct estimates of fertility and mortality. Since reliable data on number of births in a given period and the corresponding population size of the area were not available to compute the birth rate, other related and more reliable information such as average number of children born and living to mothers by age, were used to get fertility estimates. Essentially, they were developed to estimate basic fertility and mortality measures and nine of these methods are described in *Manual X*, “Indirect Techniques of Demographic Estimation” brought out in 1983 by the Population Division of the United Nations. They are mathematical or algebraic and cannot be considered as statistical techniques. *No quantification of errors* of such estimates is possible. On the other hand, the statistical techniques developed recently and called “Small Area Estimation” (SAE) methods are probabilistic in nature with the estimates defined in statistical terms with variance and distributions. They are also referred to in the statistical literature as indirect methods. Here, ‘small area’ is defined as a geographical or a domain sub-set of a universe for which the direct estimate based on the sample available for the sub-set or domain has a high coefficient of variation — over 30%, because of the small sample falling in this area. For example, in the NFHS surveys, the sample sizes at the district level are too small to get direct estimates of various demographic parameters. SAE methods allow such estimation with improvements in the precision levels by using data on the auxiliary variable of the particular sub-set or the domain for which information is known with a high degree of precision and in some way associated with the parameter to be estimated. These methods become more relevant in the context of a large number of sample surveys recently carried out in India.

**Own-children Estimation of Fertility by Birthplace, Religion and Education
using the Iran 2006 Census: An Evaluation**

**Mohammad Jalal Abbasi-Shavazi¹, Meimanat Hosseini-Chavoshi,
Taha Nourollahi and Fariba Bani-Hashemi**

University of Tehran
Email address: ¹mabbasi@ut.ac.ir

The own-children method is a reverse-survival technique to estimate fertility measures using census or survey data. The method is useful for analyzing fertility levels and trends as it provides single-year estimates of fertility for 15 years prior to a census. It can also be applied to study fertility differentials. Although, fertility measures can be estimated by such characteristics as religion and nationality/birthplace that are constant during the years prior to the survey, the results can be misleading when the method is applied to such characteristics as education and occupation.

This paper examines the validity of the own-children method (OCM) of fertility estimates by religion, birthplace/nationality and education derived from the Iran 2006 Census and the 2000 IDHS. The results will be assessed by a detailed investigation of mortality assumptions, the presence of non-own children, age misreporting and undercount. ASFRs and TFRs are estimated for Iran by religion (Muslims, Christians, and other religions — Jews and Zoroastrians), and nationality (Iranians, Afghans, Iraqis and others), as well as different levels of education (illiterate, primary, secondary, high school, diploma and higher) for the period 1992-2006. The results obtained alternatively from two matching procedures (using relationship to head of household and mothers' line number) have been investigated to see the accuracy of the fertility levels and trends. The OCM estimates have also been compared with those obtained from other direct and indirect methods. Implications for the improvement of census data for applying the own-children method are discussed.

The Neighbourhood Method for Measuring Differences in Demographic Rates: Evidence from Rural Bangladesh

Nurul Alam¹ and John A Townend²

¹ International Centre for Diarrhoeal Diseases Research (ICDDR), Dhaka, Bangladesh; ² University of Aberdeen, UK

Email address: nam@icddr.org

Methods of measuring rare events such as maternal deaths typically require large sample sizes and are expensive to conduct. We aimed to develop and test a new method with a smaller sample and much lower cost. To test the method, the area under the Health and Demographic Surveillance System (HDSS) maintained by ICDDR,B in Matlab, Bangladesh was chosen, where demographic events and rates are known precisely and some of the rates are lower in one half (the ICDDR,B services area) of the HDSS area than in the other (the Government services area).

The HDSS area is divided into 1349 'clusters' each consisting of around 35 households in 5-6 "baris" (groups of households sharing common yards). A female community health research worker (CHRW) visits every household in a cluster in one day, bimonthly. Between November 2008–January 2009, CHRWs interviewed adult women present during the interview session in two baris selected randomly per cluster per day. Respondents were asked if they knew of any women who had died whilst pregnant, giving birth, or within 6 weeks of a pregnancy ending, any other adult women deaths (15-49 years), and any child's (<10 years) death by drowning during the last three years. They were also asked about any infants <1 year, who had died during the last year, any women who had given birth to twins or triplets in the last three years, and any live births during the last two months. The Neighbourhood Maternal Mortality Index (MMI = mean number of maternal deaths reported / mean number of multiple births reported) was estimated separately for the Government area and the ICDDR,B area. Similar indices were estimated for adult women deaths, children's drowning deaths and infant deaths. The trial aimed to test whether relative differences in these indices reflected actual differences in mortality between these two areas as recorded by the HDSS.

Findings revealed that maternal mortality ratio and infant mortality rate were lower in the Government services area than in the ICDDR,B services area, and this was reflected in the MMI and infant mortality indices calculated from the survey which were 33% and 47% lower, respectively, in the ICDDR,B services area. The percent differences in mean number of multiple births, adult women deaths and drowning deaths reported in the two areas were also comparable with the percent differences in actual rates of multiple births, adult women deaths and drowning deaths in the two areas. Reported numbers of live births and multiple births were very similar in both areas in both the survey and HDSS data.

We conclude that the Neighbourhood method draws upon the knowledge that individuals have knowledge of events in a wider population than their own home or family, as traditionally asked about in surveys. The findings suggest that the method has potential for monitoring differences between areas and changes over time in the rates of rare health events, requiring a smaller sample size and costing less than existing methods.

Knowledge and Beliefs of Ordinary People about Developmental Hierarchies¹

Arland Thornton – University of Michigan
Georgina Binstock – Cenep-Conicet, Argentina
Mohammad Jalal Abbasi-Shavazi – University of Tehran
Dirgha Ghimire – University of Michigan
Arjan Gjonca – London School of Economics
Attila Melegh – Demographic Research Institute
Colter Mitchell – Princeton University
Mansoor Moaddel – Eastern Michigan University
Yu Xie -- University of Michigan
Li-shou Yang -- University of Michigan
Linda Young-DeMarco – University of Michigan
Kathryn Yount – Emory University

Scholars and policy makers have for centuries used developmental hierarchies to characterize different countries. The hypothesis motivating this paper is that such thinking has been circulated internationally and is used by ordinary people. This paper uses data from surveys in twelve diverse countries to study how developmental hierarchies are understood in everyday life. We compare how ordinary people rate countries on development with the United Nations ratings on its Human Development Index (HDI). Our research shows that most people can rate countries on development and do so very similarly to the UN. These findings suggest that developmental hierarchies are widely understood around the world and are widely available to ordinary people as they make decisions about many aspects of life.

¹ With the exception of Arland Thornton and Georgina Binstock who coordinated the analyses for this paper, the authors are listed alphabetically.

Who participates? The “Penalty” of caste and ethnicity on participation in local level collective action programs

Meeta Pradhan, Dirgha J. Ghimire, Prem Bhandari
Population Studies Center, University of Michigan, Ann Arbor, USA
Email address: meetasp@umich.edu

This study examines the influence of ascribed social identities of caste and ethnicity on participation in local level collective action programmes, most of which aim to improve the life condition of people in poor communities. The framework of social exclusion is used to examine how historically held values, social norms and practices continue to influence life opportunities and create barriers for individuals.

Analysis of a unique set of survey data from Nepal shows that one’s caste and ethnicity has a strong and independent effect on an individual’s participation in such community level collective action programmes while controlling for a set of individual level experiences that are known to influence participation. The analysis provides much needed evidence of disparities in the rates of participation of individuals in poor communities. The evidence points to the need for a closer examination of the mechanisms that link social identity and participation in local level collective action programmes in order to build better accountability in implementation of government policies and programmes that focus on social inclusion, social equity and poverty alleviation.

Post MFA effects in Bangladesh

Nashid Kamal¹, Gareth Ambler² and Rumana Z. Omar¹

¹North South University, Dhaka, Bangladesh;

²University College London, UK

E-mail address: ¹nashidk@gmail.com

Bangladesh enjoyed the multifibre agreement (MFA) which allowed them some tariff free export of garments to the international market. This MFA expired in December 2004 and it was predicted from earlier experiences that many factories would close down and an estimated 1.3 million women workers would lose their jobs. In one small study conducted earlier, it was found that garment workers who lost their jobs shifted to either sex work, domestic work or became housewives (Ward et al, 2004). The objective of this study was to look at the effects of post MFA on working women in the urban slums of Dhaka and identify the correlates of change in employment amongst them. The study is a longitudinal study which follows 300 women from the urban slums of Dhaka for a period of almost two years from June 2004. These women are from four categories: garment worker, sex worker, domestic worker and housewife, the latter being the reference category. Four rounds of data were collected, recording three changes in employment status. Logistic regression (for clustered data) was used to model the outcome variable 'change in employment' on various correlates. Change in employment is coded 1 if yes and 0 otherwise, the 4 rounds of study led to three possibilities of change amongst 300 women, which led to a total of 900 observations (when turned into longitudinal data). The sex workers included in this sample made no change in employment during the period of this study. In the final analysis, there were only 675 women with some dropouts due to failure to obtain information in four successive rounds. Although the sex workers did not change to any other area of employment, in the current study, they were found to possess the highest levels of educational qualifications. The study finds that, 95% of the women remained in garment work and none went to sex or domestic work, although some became housewives. Apart from this crucial finding, the study also finds that the 'round' of the survey and her 'total income' were significantly correlated with change in employment. Women were more likely to change employment in the third round, compared to the first round which eliminates the immediate effect of post MFA. Additionally, compared to the women with the lowest levels of income, women who had higher levels of income were more likely to experience change in employment. This implies that post MFA employment change was not significant. The finding matches with the national situation where post MFA joblessness was not significant. Most factories diversified themselves and shifted to knitwear and were not only able to retain their workers but also earn higher profits for the country. Further diversification of the garment industry is recommended so that future changes in global economic policy may not create a blow. Additionally, creation of more lucrative jobs for females with some degree of literacy is recommended.

Housing Class and Tenure Decision in Contemporary Urban China

Junhua Chen

Department of Business, Macquarie University, New South Wales, Australia

Email address: pkujunhuachen@gmail.com

One of the most significant and dramatic changes in contemporary urban China is the transition in housing tenure policy as a result of economic reforms in the past three decades. Based on data from a recent study in four large Chinese cities, this paper examines three housing groups and their housing tenure decisions in China's major urban centres where households have been gradually segregated into individual housing groups with distinct tenure decisions and outcomes in the urban housing market. The paper explores the concept of housing class in the context of Chinese society since the introduction of a market-oriented housing reform in 1998.

Findings suggest that all households in urban China (both local and temporary migrant households) can be classified into three housing classes according to their housing tenure decisions: landlords, homeowners and renters. While the conventional definition of 'class' is a politically constituted social formation with an economic base, housing class in urban China is formed by differences in people's possession of residential housing property. Multivariate analyses applied to housing tenure decisions among the three housing classes show that apart from certain socio-economic factors similar to those in the West, institutional factors such as the 'Hukou' system and resident status (local or temporary migrant) are also significant, suggesting that, in urban China, the previous welfare housing allocation before 1998 still has a considerable effect on the household's tenure decision.

Finally, the paper implies that limited housing tenure decisions may have caused over privatisation and, to a certain extent, to a single urban housing system, which would lead to conflict among people in various housing classes as a response to the inequality in urban housing provision and the urban housing market.

Hukou (Chinese Household Registration System) was promulgated by 1958 *Hukou* regulation (*Hukou dengji tiaoli*). The Household Registration or *Hukou* is an identification system in which every citizen is registered at the place of his/her birth, the place to which he or she is permitted to move, or his or her mother's place of registration. In the pre-reform era, one's *Hukou* status was often associated with various subsidies or other benefits provided by the government. It divides Chinese citizens into two major categories: agricultural and non-agricultural residents. People with non-agricultural *Hukou* status often enjoyed more benefits than those with agricultural status, e.g. non-agricultural residents in cities could enjoy free or cheap housing, medical services, education, and employment opportunities, while their counterparts with agricultural *Hukou* status would not normally be entitled.

See Guo and Iredale (2004), Cheng and Selden (1994), and Yang (1993) for detailed reference.

**Convergence/Divergence between Traditional and Professional Health Care System:
Case of Indigenous Communities in Southern Philippines**

Anderson Villa

Graduate School of Asia Pacific Studies, Ritsumeikan Asia Pacific University, Japan

Email address: andevi09@apu.ac.jp

Indigenous communities have been underserved, if not deprived, of varied health care services. Recent studies, however, reveal that traditional and modern health practices are both present in these communities and cater to their needs and demands. This study examined the convergence and divergence of traditional and professional health care systems among the Blaan communities in the municipality of Sarangani (Mindanao, Southern Philippines) in the context of child health care services. It aimed to specifically describe how the mother-respondents view child health care and illness; child health care practices; how they promote their children's health and manage their child's illness; how they view the traditional health system and professional health system; why they seek child health care services from traditional and professional health systems; and explore how the traditional health system and professional health system converge in their concept of child health and illness, child-care practices and promotion of child health and management of illness. The study utilized an exploratory design which aimed to investigate an area where there is a dearth of information in the local literature. The main method employed in this qualitative study was in-depth interviews of 15 mothers as respondents. The recorded verbatim responses and perceptions as well as the documented data were processed, encoded manually, and the researcher employed content analysis.

Findings indicated that convergence can be seen in the presence of health providers from both systems, while divergence is found in service provision and the nature of service use. A convergence existed too in the respondents' concept of health such that Blaans generally perceive health with being active, energetic, and free from all forms of sickness. A divergence however existed when it came to their concept of ill-health. Data also revealed that mother-respondents perceived traditional medicine in the context of the provision of herbal medicines and other special amulets while modern medicine is seen in the distribution of free vaccines and other immunization services. Thus, it is also in this context that both traditional and professional health systems diverge. Social and cultural factors also influenced their level of utilization of child health care services from either the traditional or professional health care system. Findings disclosed that the cost of child health services influences access, while the attitudes of health providers and the geographical location also influence the utilization of services from either of these systems.

Role of Integrated Child Development Services (ICDS) to Improve Child Health in Selected States of India

Nabanita Majumder¹, Kamla Gupta² and Ravi Prakash³

Department of Migration and Urban Studies,
International Institute for Population Sciences, Mumbai, India
Email address: nabashuva@gmail.com

The Integrated Child Development Services (ICDS) scheme represents one of the world's largest and most unique programmes for early childhood development. It is the foremost symbol of India's commitment to her children; India's response to the challenge of providing pre-school education to children, and breaking the vicious cycle of malnutrition, morbidity and mortality among children. The ICDS programme adopts a multi-dimensional approach to child well-being, incorporating health, education and nutrition interventions. While the existing literature shows several contradictory results about the impact of the ICDS programme, academicians, economists, researchers and policymakers hold different views. The basic multidimensional aim of the programme is to mitigate the basic needs of mothers and children, particularly those from socially and economically backward strata. Thus, while selecting locations, preference is given to locations that are predominantly inhabited by poorer and more oppressed sections so that the poorest people can take advantage of the services.

Using data from the third round of the NFHS (NFHS-3, 2005-06), this study makes an attempt to analyze the differentials in child health outcomes in ICDS and non-ICDS areas. It also examines how ICDS services are useful in improving child health in India and six selected states namely Bihar, Uttar Pradesh, Rajasthan, Madhya Pradesh, Maharashtra, and Andhra Pradesh. Bivariate and multivariate techniques have been applied for the analyses. The dependent variables are initiation of breast-feeding within one hour of birth, any anaemia, full immunization and nutritional status of children (underweight). Socio-economic variables such as age of the child, sex, religion, caste, place of residence, mother's education, and wealth index have been used as predictor variables.

Preliminary results suggest that child health status varies for different indicators in ICDS and non-ICDS areas at the national level as well as within and across the selected states. None of the states was found to be progressive or regressive for all the indicators at a time. For instance, the prevalence of under nutrition among children in ICDS areas was greater in Rajasthan, Uttar Pradesh, Bihar and Madhya Pradesh compared to Andhra Pradesh. In contrast, in Uttar Pradesh, initiation of breastfeeding was significantly higher in ICDS areas than in non-ICDS areas; the argument being that in Uttar Pradesh, ICDS services are utilized by relatively better-off people. Findings of this study, however, go in a different direction in that the utilization of ICDS services is greater among scheduled castes/tribes, poor households, uneducated mothers and those living in rural areas. However, it should be noted that utilization of ICDS services varies from one state to another.

At the outset thus, our findings confirm the notion that the overall performance of the ICDS programme is encouraging and that it can make a difference if it works properly, at least at the sub-national level. ICDS has been and is a well-integrated child development programme.

Therefore, professionals, administrators and politicians should feel obliged to continue to contribute to its effective implementation to ensure the health and productivity of our future generations.

Multidimensional Poverty and the State of Child Health in India

Sanjay K. Mohanty

International Institute for Population Sciences, Mumbai, India

Email address: sanjayiips@yahoo.co.in

Using data from the National Family Health Survey, India, this paper measures and validates the extent of multidimensional poverty and examines the linkages of poverty level with child survival. Multidimensional poverty is measured in the domain of education, health and living standards, and child survival is measured with respect to infant mortality rate and the under-five mortality rate. Results indicate that one-fifth of the households in India are abject poor; half of them are poor and have limited access to child care. While the infant mortality rate and under-five mortality rate are disproportionately higher among the abject poor compared to the non-poor, there are no significant differences in child survival among the educationally, economically and health poor; at the national level. Regional patterns in child survival among the educationally, economically and health poor are mixed.

Migration and Earning: The Impact of Earnings Gap on Decision to Migrate of Labor in Indonesia

Hasnani Rangkuti

BPS Statistics, Depok, Indonesia

E-mail address: naini.ray@gmail.com

The decision to migrate could be utilized as an alternative solution to improve one's capital and welfare as well. The aim of this study is to explore the motivational factors behind the decision of labor in Indonesia to migrate with giving more focus on the earnings gap before and after migration. By using longitudinal data from 1993 and 2000 waves of the Indonesian Family Life Survey (IFLS) to observe the same people from 1993 and trace them to 2000. By doing so, it is hoped that information and result estimation gathered from this longitudinal data would be more accurate. The earnings gap was derived from earning functions of 1993 and 2000, the estimation of which is corrected by a bias selectivity sample, since earnings data were available only for those who are working for money. Migrant workers are decided based on their condition in 2000. As migrants are selective, their migration status is treated as a selection process and is incorporated into the earning function of migrant workers in 2000. The source of earnings gap is derived from the difference in earnings between their earning function in 2000 and 1993. Decision of labor to migrate was estimated by using Probit regression model. The empirical study demonstrates that the earnings gap significantly influenced the decision of labor to migrate.. The positive sign of this variable proved that migration could improve one's life. The more the earnings gap increases the more the probability to plunge into migration. After the earnings gap reached a plateau, the desire to migrate among laborers gradually decreased. Related to the current condition which is based on the data, one can say that the probability to migrate as a response to the earnings gap is so high that it will take about 60 years from now, exactly in 2060, when the probability to migrate will decrease, *ceteris paribus*. Moreover, this study also reveals that marital status, working spouse, schooling children, household size, family structure, and assets seem to be significant in influencing the decision to migrate. The existence of children below age five and transfer were not significant. Regardless of the population equity among regions, based on the migrant's view, policies that can make the process of migration easier are required. Moreover, appropriate access toward labors to respond to the earnings gap between two places without moving permanently is needed.

Urbanization and Migration Impact in Thailand: Settlement Patterns and Socioeconomic Trends

Kerry Richter and Sureeporn Punpuing

Institute for Population and Social Research, Mahidol University, Thailand

Email address: krichter99@gmail.com

As Thailand has emerged as a middle income country in the region, urban growth has proceeded rapidly. This growth is the result of both longstanding migration patterns and new settlement trends. About one-third of the population now lives in urban areas.

This paper will explore trends in internal migration in Thailand during the past twenty years. It will also examine the impact of these trends including urbanization patterns and differentials among urban and rural dwellers in terms of socio-economic well-being. A number of national data sources and surveys will be used to analyze these trends and patterns, in order to give a comprehensive overview. Issues to be explored include poverty disparity, positive aspects of urban growth, and the role of international migrant workers in influencing urbanization trends.

An extensive literature review of findings on internal migration trends in Thailand in the past twenty years gives the background to the trends and patterns presented. The Migration Survey conducted by the National Statistical Office is used to examine migration rates and streams, using data from 1997-2009. The paper also uses data from the Socioeconomic Survey of Thailand from 1986 to 2008 to examine differentials in measures of socio-economic well-being and inequality by urban status.

Findings indicate that migration rates have declined in Thailand in recent years. Most of this decline has taken place in the 18-24 and 25-34 age groups, and in the rural-rural and urban-rural migration streams. Growth in Bangkok has slowed, and while Bangkok's periphery grew rapidly in the 1980s and 1990s, this growth has also slowed in recent years. Rural and urban dwellers have become more similar in age distribution and educational attainment, but disparities in income continue.

The findings will be used to develop policy recommendations for Thailand's 11th National Development Plan.

How far rural-to-Urban Migration is Associated with Child Health Care Utilization? Evidence from India

Kunal Keshri¹ and R B Bhagat²

Department of Migration and Urban Studies,
International Institute for Population Sciences, Mumbai, India
Email address: kunalkeshri.lrd@gmail.com

Child health continues to be an important issue for most developing countries. Consequently, demographic research has devoted copious studies to understand the factors associated with child health. Amid increasing urbanization and concomitantly accelerating rural-urban migration, many research studies have focused on the association between migration and child survival. Unquestionably, rural areas lag behind urban areas with respect to the availability of child health care services, both preventive as well as curative, and several studies have shown that the place of residence and income are imperative determinants of child mortality and significantly affect child health care practices. The last decade has documented accelerating rural- migration to big cities in India, providing ample scope for investigating its association with child health and health care utilization. This paper is an attempt to examine the association between rural-urban migration and the utilization of preventive and curative child health care services. It also analyzes the differentials of mortality rates and child health care utilization among different migrant and non-migrant groups (natives) using the latest dataset – that of India's third round of the National Family Health Survey, NFHS-3, 2005-06.

The study shows that with respect to utilization of child health care services, the position of rural natives is abysmal as compared to their urban counterparts. While rural-urban migrants are in a good condition in comparison to them. Further, there is a large difference between the percentages of full childhood immunization: highest among urban natives (81%), followed by rural-to-urban migrants, (54 %) and least among rural natives (36%). With regard to curative care for acute respiratory infection, rural-urban migrants are closer to urban migrants with higher percentages of migrant children having received treatment for both ailments. Respiratory infection was also higher among children of rural-urban migrants than among those of rural natives. Similar results were observed in case of treatment seeking for diarrhoea. Multivariate results show that Scheduled Tribes lag behind other castes, and utilization of child health care services increases with an increase in the educational level of women. Findings further indicate that mass media exposure plays a positive role in child health care utilization among migrants and natives after controlling for other variables. Differentials in infant mortality rates show that among rural-to-urban migrants, infant mortality is high compared to rural natives but child mortality rates are the highest among rural natives.

The study leads to the conclusion that the socio-economic status of rural-to-urban migrants has improved after migration but has yet to reach the level of urban natives.

On Migration and the Changing Geography of Southeast Asian Language Groups:

Census-Based Measures and Results

Peter Xenos

University of Hawaii, Honolulu, Hawaii, USA

E-mail address: xenosp@hawaii.edu

Ethnic or language groups can be often associated with traditional homelands -- geographically focused parts of what have recently become national territories. This is very much the case throughout Southeast and South Asia as linguistic maps make amply clear. Complex settlement histories have often produced spatial differentiation and the segregation of groups, but also the interpenetration of multiple ethnic groups within the same territorial unit. Additionally, colonial boundary-setting has determined in which national entities particular groups would find themselves minorities, the process quite often dividing the same ethnic group among two or more adjoining countries. The resulting very complex post-colonial ethnic mosaic across the region has undergone significant change in recent decades under the joint pressures of population growth and the ongoing integration of nation states. All this amounts to the reshaping of the geography of ethnicity by means of two migration processes of historic magnitude. One is the diffusion of minority populations outward from their traditional and/or most recent territories, and the other is the intrusion or invasion into those home territories of the majority population and sometimes of other minorities as well. In detailed field studies as well as recent censuses, two important results are apparent. One of these is increased language diversity within small geographic areas. This is apparent in many of the home territories, and often in the major cities as well. The other is diminished spatial segregation between pairs of ethnic groups and, especially, between each ethnic group and the national majority population. The immediate local consequences of this spatial reorganization include, for example, greater personal-level contact between ethnic/language groups and more complex inter-group competition over resources. For ethno-linguistic groups, these changes carry important implications, for example for demographic security, and for the survivability of languages. At its core, this paper seeks to find interrelationships between migration processes and the changing demography of ethnic groups. These are connections that have much additional significance beyond the local, bearing as they do on the whole progress and shape of modern state formation. This initial examination of these issues looks at Vietnam and the Philippines societies with many numerically significant ethnic minority populations, high rates of internal migration, and the census data required to examine these issues. We take advantage of very large sample census files for these countries, detailing minority ethnic or language groups and providing geographic coding at all administrative levels down to small areas. The analysis is carried out on the basis of summary indicators for areas and ethnic groups summarizing (1) the geographic distribution of language groups at several levels of aggregation; (2) the degree of language group diversity within areas, at each of the several levels, and the degree of spatial segregation at each level, first for each minority versus the majority ethnicity, then between pairs of the most important ethnic/language groups. Migrants and non-migrants are distinguished and the role of migration examined throughout.

**Does Fertility Decline Lead to Mortality Decline?
An Assessment of Reverse Causation Effect in Case of India**

Arokiasamy Perianayagam¹, Mohd. Shannawaz and Srinivas Goli
International Institute for Population Sciences (IIPS), Mumbai, India
e-mail address: ¹parokiasamy@yahoo.co.uk

In the process of demographic transition, the relationship between mortality and fertility has been a contentious subject of research for a long time. The prevailing theoretical assumption is that high fertility is a biological and behavioral response to high mortality. This assumption is manifested in numerous theories that include the theory of change and response and demographic transition, the child survival and child replacement hypothesis which emphasizes a one way causal relationship. In contrast to these theoretical arguments, there have been a few studies that have tried to argue that high mortality could be a response to high fertility, instead of a stimulus. Whereas the demographic transition theory postulates that reduction in early childhood mortality is a direct mediating factor for reduction in fertility, contrary inferences have been documented during the mid-stage of the demographic transition, where the incidence of infant deaths possibly remains high in response to high fertility levels. Studies have recognized as close spacing of births, marriages at young ages and poor nutritional status, less per capita household availability of resources as factors influencing childhood mortality. The slow pace and recent stagnation in the reduction of infant mortality in India and its several states is possibly attributed to stagnating trends in fertility decline. States like Andhra Pradesh indicate discernable evidence of faster decline in fertility than reduction in infant mortality where higher child mortality rates are accentuated by early marriages, short birth intervals and low birth weight. The Indian states that are currently passing through mid to end stages of demographic transition provide wide-spread evidence of the changing relationship between fertility and mortality. In this paper, we examine evidences of how stable fertility in the middle course of the transition is a causative factor of higher infant and child mortality and slow progress in life expectancy. We use data from family welfare statistics from the Ministry of Health and Family Welfare; Government of India and Sample Registration System to construct trends and examine the linkages between fertility, mortality and family planning indicators. We further use recent NFHS-3 data to examine fertility and early childhood mortality linkages. The results suggest that higher order births, short birth intervals and young age mothers are key contributory factors for higher childhood mortality. The increasing contraceptive use, spacing of births, late age at marriage and consequent reduction in childhood mortality suggest evidence of reverse causation. The incidences of higher infant mortality for higher order births suggest that a decline in higher order births leads to a decline in infant mortality. Trend analysis of TFR and life expectancy further illustrated evidence of reverse causal relationship. Similar relationship is observed in terms of trends of couple protection rate and infant and neo-natal mortality rates; family size and infant mortality. Results of decomposition analysis reveal that 47% of the change in infant mortality rate is explained by different variables related to fertility control. Overall, the evidences are substantial that a decline in fertility leads to a decline in early childhood mortality in the Indian states.

Influence of Women's Autonomy on Infant Mortality in Nepal

Ramesh Adhikari^{1,2} and Yothin Sawangdee²

¹ Geography and Population Department, Tribhuvan University, Kathmandu, Nepal;

² Institute for Population and Social Research, Mahidol University, Thailand

Email address: ¹rameshipsr@gmail.com

In the past decade, Nepal has seen substantial improvements in its reproductive health outcomes; however, infant mortality is still very high compared to other developing countries in Asia. Nepalese women lag behind men in many areas such as educational attainment, participation in decision making and health service utilization, among others. The objective of this paper is to examine the factors influencing infant mortality; more specifically, it aims to investigate whether women's autonomy (mother's education and participation in decision making regarding health care) has an impact on infant mortality in the Nepali context.

The paper reports on data drawn from the Nepal Demographic and Health Survey (NDHS), 2006. The analysis is confined to 5,545 children who were born within five years preceding the survey. The association between infant mortality and the explanatory variables was assessed using bivariate analysis. Then, the variables were re-examined in multivariate analysis (binary logistic regression) to assess the net effect of women's autonomy on infant mortality after controlling for other variables.

Findings indicated that the infant mortality rate in the five years preceding the survey was 48 deaths per one thousand live births. Infant mortality varied with different settings. It was high among illiterate women (56 per 1000 live births), those not involved in decision making for health care (54 per 1000 live births), and those who did not visit a health facility for their own care or their child's health in the past 12 months (66 per 1000 live births). Furthermore, infant mortality was high among women who had more children, who had less than a two-year birth interval, who had multiple births, who were from rural areas, who were poor, whose source of water was a river or an unprotected source, and those who did not have a toilet facility, than their comparison group.

Results from logistic regression showed that women's autonomy plays a major role in infant mortality after controlling for other variables in the models, such as mother's socio-demographic characteristics along with children's and household characteristics. Children of literate women were 32% less likely (OR=0.68) to die within one year of birth than children of illiterate women. Furthermore, infants of women who were involved in decision making on health care were 25% less likely (OR=0.75) to die before reaching one year than those whose mothers were not involved in making such decisions. We conclude that in the context of high infant mortality in Nepal, mothers who are literate only and who have been involved in decision making for health care appear to be the most powerful predictors for reducing infant mortality. Hence, in order to reduce infant mortality further, ongoing female education should be sustained with universal coverage for every woman, so as to reach the MDG goals for the year 2015. In addition, programmes should focus on increasing women's autonomy so that infant mortality will decrease and the overall wellbeing of the family will be maintained and enhanced.

Hindu-Muslim Differentials in Child Mortality in India

Michel Guillot¹ and Keera Allendorf²

¹ University of Pennsylvania, PA, USA;

² University of Illinois at Urbana-Champaign, IL, USA

Email address: ¹miguillo@sas.upenn.edu

In India, Muslim children exhibit lower child mortality than Hindu children, in spite of the fact that, on average, their mothers are poorer and less educated – characteristics typically associated with higher child mortality. Using data from the National Family Health Surveys (NFHS-1, -2 and -3), we seek explanations for this paradox. We test the hypothesis that this paradox may be explained by lower son preference among Muslims. Indeed, lower son preference could produce a more typical pattern of sex differentials in mortality among Muslims and generate lower child mortality among them at the national level, compensating for their lower socio-economic status. However, we find no evidence for this hypothesis in the NFHS data. We find that Muslims are subject to a number of advantages, in addition to the better known disadvantages, which appear to contribute to their lower child mortality. However, part of the Muslim mortality advantage remains unexplained.

How can Countries of Origin Protect the Workers they Deploy Abroad?

Jerrold W. Huguet

Independent Consultant, Thailand
Email address: jwhuguet@yahoo.com

It is difficult for a government that formally deploys migrant workers to other countries to offer them an adequate level of protection while they are in the host country. Nonetheless, governments in Asia have taken a number of actions with this goal in mind.

The objectives of this paper are: (1) to review and critique the steps that governments in Asia have taken to offer protection to nationals deployed abroad and (2) to recommend policies and approaches that could enhance the current level of protection and, at the same time, contribute to socio-economic development.

The paper will carry out policy analysis based on published sources. It will not use primary data or conduct original research. Current measures implemented by countries of origin aimed at protecting workers deployed abroad will be reviewed by grouping them into two main categories: (1) measures that relate to migration management and can, therefore, be implemented in the near term and (2) measures that link migration policy with national development and thus are longer-term goals.

Steps that governments in Asia have taken to ensure the protection of their migrant workers include streamlining the recruitment process by setting up one-stop service centres, establishing recruitment offices at the provincial and district level, reducing the fees charged and providing public information about the procedures involved. They also must regulate private recruitment agencies, ensure that employment contracts are in place, and provide adequate pre-departure skills certification and orientation. Countries also place labour attachés and welfare officers overseas to assist migrant workers. Longer-term strategies include negotiating memoranda of understanding with countries of destination, enhancing the skills and training of workers deployed abroad, facilitating the transfer and productive use of remittances, and establishing savings and pension schemes to which workers may contribute both while overseas and at home.

All countries of origin have some measures in place to afford protection to workers being deployed abroad. Ironically, some of these measures have been introduced at the request of countries of origin, for example, those required in order to participate in the Employment Permit System of the Republic of Korea. Many governments in the region, however, still give greater attention to the promotion of employment opportunities for their nationals than to actions to ensure the protection of the workers deployed. Labour migration needs to be incorporated as a part of the national development strategy, with a long-term goal of enhancing the human resources and productivity of the labour force. The paper will recommend policy approaches meant to provide greater protection to migrant workers while promoting national economic development.

Has Permanent Settlement of Temporary Migrant Workers in Thailand Begun?

Aphichat Chamrathirong¹, Wathinee Boonchalaksi² and Jerrold Huguet³

^{1,2}Institute for Population and Social Research, Mahidol University, Thailand, ³Independent Consultant, Thailand

E-mail address: ¹pracr@mahidol.ac.th; ²prwbc@mahidol.ac.th; ³jwhuguet@yahoo.com

Policies of the Thai Government assume that low-skilled migrants from the neighboring countries of Cambodia, Lao People's Democratic Republic and Myanmar come as individuals for only a temporary period. Thus, work permits are issued for only one or two years, with the possibility of a one-year extension. This view may not reflect the actual circumstances of the approximately two million such migrants in Thailand.

The objectives of the paper are: (1) to assess the degree of integration of low-skilled migrant workers in Thailand and the potential for their settlement, and (2) to review policy options the Government could choose in dealing with the situation.

The Institute for Population and Social Research (IPSR), Mahidol University, has carried out two surveys as part of an evaluation of a project on the Prevention of HIV/AIDS among migrant workers in Thailand. The surveys targeted migrants from Myanmar in coastal and inland provinces, and workers from Cambodia in coastal provinces. The baseline survey in 2004 had 3,375 respondents and the follow-up survey in 2008 had 3,387 respondents. Several questions in these surveys yield considerable information on variables that can be taken to indicate the degree of integration and potential for the settlement of migrants.

The 2008 survey found that the average duration of stay in Thailand among the respondents was 5.3 years and the average duration in the current province was 4.3 years. The average duration in the current job was 3.7 years for Myanmar migrants in the coastal provinces and 4.6 years for those in the inland provinces. All these figures had increased between 2004 and 2008. The data also indicate that the proportion married and the likelihood of living with a family member had increased between the two surveys. Two-thirds of the Myanmar migrants in the coastal provinces lived with family members in 2008. Although work permits are issued only for persons at least 15 years of age, many families have children with them. Seventy-five per cent of the children aged 0-4 years among Myanmar migrants had been born in Thailand. School enrolment among migrant children aged 5-12 years had increased considerably between the two surveys.

We conclude that in spite of regulations that treat migrant workers as temporary and that make no allowance for children under age 15 or other dependents, the recent survey data indicate that many migrants have been in Thailand for more than five years, and the likelihood of living with family members and having their children attend school has increased. Whether government policies are likely to promote the exclusion, incorporation or assimilation of migrants from neighboring countries is not yet evident.

Localization of Labor and International Migration

Kailash Chandra Das¹ and Nilambari Gokhale²

¹International Institute for Population Sciences, Mumbai, India

E-mail address: ¹daskc@yahoo.com

During the last twenty years, increasing proportions of immigrants to the total population of Gulf nations has been considered as a growing dependency on foreign labor force as well as one of the root causes behind current unemployment. Countries like Saudi Arabia, Oman, U.A.E. and Bahrain have come up with the policy of localization of labor also known as Omanisation policy where foreign labor is replaced by the local labor force. The present paper analyzes the phenomenon of localization of labor and its impact on international migration in Oman by using secondary data mostly published by the government. The development policy includes the Omanisation Programme as an attempt to reduce local unemployment and dependence on foreign labor through various strategies like enhancing educational and vocational training and reservation of jobs for nationals. Current localization policies in Oman play a key role in deciding future international migration trends. The new policy adversely affects the flow of immigrants to Oman especially from South Asian countries like India, Pakistan, Bangladesh, Sri Lanka etc. With continuously expanding economic activity and a small base of national population in most of the GCC countries, it is possible that these countries may face a serious labor crisis in the future as expatriates are welcome in selective areas from selective counties due to the new immigration policy.

**The Economic Consequences of Ethnic-Priority Immigration:
The Determinants of Earning Differentials among Japanese Brazilian Migrants in Japan**

Masataka Nakagawa

Waseda University, Saitama, Japan

E-mail address: m.nakagawa@aoni.waseda.jp

While being one of the country's fastest growing immigrant populations, Japanese Brazilian migrants are subject to growing tensions between the demographic and economic forces promoting immigration and government attempts to regulate this process in Japan. By removing restrictions on entry and residence for foreign-born people of Japanese descent, the amendment of the Japanese Immigration Act of 1990 (*1990 ICRRRA*) facilitated economically-motivated migration from South America, particularly from Brazil, which is home to the largest overseas ethnic-Japanese (*Nikkei*) population. Despite the principle that 'non-skilled foreign workers are not admitted for employment purposes' being retained under the country's immigration policy, the ethnic-priority feature of the *1990 ICRRRA* has been utilized as a 'side door' through which an increasing number of Japanese Brazilian migrants have been absorbed into the low-skilled end of the Japanese labor market. The 'side-door' has been utilized by both Japanese industries seeking to meet the burgeoning demand for a flexible and non-skilled workforce under the economic restructuring process and by Japanese Brazilian migrants seeking better employment opportunities in Japan. As an attempt to assess their labor market incorporation, this paper analyzes factors influencing individual-level labor market outcomes among Japanese Brazilian migrants in Japan. Original data collected through a fieldwork survey is used to conduct multivariate analysis distinguishing the role of social capital from that of human capital in the determination of earnings. While empirically illustrating the features of their peripheral employment, the results of the multivariate analysis identify the factors underlining variations in labor market outcomes among Japanese Brazilian migrant workers, contrasting the effects of human capital and social capital. With earnings differences being found not reflecting educational attainment and occupational status in Brazil and migrant experience in Japan, the multivariate results do not provide evidence supporting the hypothesis derived from the human capital theory. It is observed, on the other hand, that Japanese Brazilian migrants who have obtained their job through friendship or kinship ties earn significantly more than those who did not utilize these interpersonal networks, indicating the significance of social capital for this economically disadvantaged and institutionally vulnerable immigrant group.

Infertility in India: Its Levels, Determinants and its impact on family

T.S. Syamala

Institute for Social and Economic Change, Bengaluru, India

Email address: syamala@isec.ac.in

Although treatment and prevention of infertility are integral components of the ICPD Programme of Action, these programmes do not adequately focus on infertility in India's reproductive and child health programme. Studies around the world have shown that infertility is a growing problem which needs immediate attention. In many developing countries, this issue has gained importance due to the inadequacy of medical facilities that address infertility. In the present Indian social and cultural context where motherhood is often associated with a woman's identity and desire for children is nearly universal, the impact of infertility on women's lives is considerable. However, in the Indian context, data on levels, trends and consequences of infertility are very limited, although a few recent studies have attempted to address the issue. Given this background, this study primarily addresses the issue of infertility, its levels, determinants and impact on the family in India.

This study draws its data from the National Family Health Survey conducted in Indian 2005-06. Although infertility includes both primary and secondary infertility, it focuses only on primary infertility. Primary infertility here is defined as the absence of a pregnancy resulting in live birth for those non contracepting women who have seven or more years of marital duration. The study uses age specific marital infertility rates and general marital infertility rates to measure the level of infertility and bivariate and multivariate analyses, to explore the pattern of infertility in India and its states, and its differentials across different background characteristics of the women, such as education, wealth index, place of residence, religion, among others, and also looks at the major determinants of infertility in India and its states. In addition, the study also addresses the impact of infertility on the family such as marital disruption, extra-marital affairs, divorce and violence against women

Primary and Secondary Infertility in India: A Study based on District Level Household Survey

Sayed Unisa

International Institute for Population Sciences, Mumbai, India

E-mail address: unisa@iips.net

Despite its well-established links to other aspects of reproductive ill health, such as sexually transmitted infections and unsafe abortion, infertility is the most neglected component in the reproductive health programmes of many developing countries. In the case of India also, no special government interventions or programmes exist to treat infertile couples. Studies on type of treatment sought by infertile women are sporadic. The number of private hospital specialists offering treatment to infertile couples has increased tremendously and popularized their services by extensive advertising. Under these circumstances, people are likely to go for allopathic treatment rather than to traditional or religious healers as in the past (Unisa 1999; Unisa 2001). There is a dearth of information about the role of modern health services in infertility treatment and about the cost of treatment. For the first time in India, a large-scale survey, the District Level Household Survey-3 (2007-2008) covering 600,000 women has canvassed questions on infertility along with mother and childcare. An attempt is made in this paper to examine whether any woman had any problem in conceiving any time during her reproductive span and whether treatment had been sought by her (couple) to overcome this. Further, the association between sexually transmitted diseases and menstrual problems are examined. A preliminary analysis of data shows that among ever married women with a marital duration of two or more years, about 8.7% had ever suffered from either primary or secondary infertility. Majority of those who reported infertility problems had suffered from primary infertility. All currently childless women have not reported infertility as some of them are voluntarily childless especially in case of Goa and Tamil Nadu. Analysis of cost, type of treatment and success of different treatments are in process.

**Depression and Social Consequences among Mothers Suffering from Perinatal Loss:
Perspective from a Low Income Country.**

Kaniz Gausia, Allisyn Moran, Marge Koblinsky, Mohammad Ali, David Ryder and Colleen Fisher

Email address: kaniz@icddr.org

Perinatal death has a major emotional impact on mothers with significant repercussions for the health and well-being of the family. While these psychological and social consequences have been quite well studied in developed countries, there is considerably less information available from low income countries which bear the brunt of the perinatal mortality burden. The objective of this paper was to examine depression and negative social consequences among women with a perinatal loss in rural Matlab, Bangladesh.

The sample included all women with facility deliveries who experienced obstetric complications, a random sample of women with non-complicated normal deliveries, and all women with perinatal deaths in the Matlab project area, who gave birth between January 2007 and December 2008. Psychological assessment was done at 6 weeks and 6 months, and social consequences at 6 months after delivery using structured questionnaires by trained female interviewers at the participant's home.

Of the 711 participants, 122 (17%) lost their children, of which about two-thirds (65.5%) were still births and the remaining third (34.4%) early neonatal deaths. Depression status at 6 weeks remained significantly higher among participants with perinatal loss irrespective of age, maternal education, economic status, residential area, and parity. Participants with perinatal death were four times (95% CI: 2.39 – 6.15) more likely to be depressed at 6 weeks postpartum than participants who did not lose their babies. In the adjusted analysis, women who reported negative social consequences were almost three times more likely to have experienced a perinatal death (95% CI: 1.80 - 4.70).

This study indicated that women with a perinatal death are vulnerable to psychological and negative social consequences. Although the consequences may improve over time, there is little evidence as to the long-term effects on these women's lives – especially in relation to their interactions with other household members and their ability to care for their other children. Culturally-appropriate interventions need to be developed and tested for this vulnerable group.

Obesity and Reproductive Health among Indian Women

Praween K Agrawal

India HIV/AIDS Alliance, New Delhi, India

E-mail address: praween_agrawal@rediffmail.com

Obesity is rising alarmingly worldwide and is associated with several health problems. Obesity has also silently emerged as a challenging problem for India due to rapid urbanization and migration. NFHS-3 suggests that the proportions of overweight and obese women are greater than the proportion of underweight women in urban India. A number of reproductive health problems were found to be associated with obesity and overweight condition of women in several studies mostly conducted in developed countries. While obesity has been widely discussed in the context of chronic diseases such as diabetes and heart disease, far less attention has been focused on reproductive health issues in India.

This study examined the association between obesity and a wide range of reproductive health problems among adult women in Delhi, India. It used primary data collected in a follow-up survey of 325 women of Delhi, who were included in NFHS-2 (1999). Information was collected on self-reported reproductive health problems such as vaginal discharge accompanied by itching or irritation, abdominal pain and fever, symptoms of urinary tract infection like pain or burning while urinating, and difficult or frequent urination, pain during intercourse, blood visible after sex, and about menstrual length, its regularity and problems. Height and weight of each woman was also measured to compute BMI (Body Mass Index) and define level of obesity. Data are analyzed using both descriptive statistics and bivariate and multivariate analysis. The effect of obesity on reported reproductive health status is estimated using logistic regression after adjusting for women's background characteristics such as age, education, religion, caste/tribe, working status and wealth status.

Findings reveal reproductive health problems to be significantly higher among obese and overweight women than among women with normal BMI. Problems like itching or irritation, and pain or burning while urinating and irregular menstruation were also significantly higher among obese and overweight women than among normal women. Itching or irritation was reported by 12% of obese women and 7% of overweight women compared to only 4% of normal women. All kinds of menstrual irregularities were found to be significantly higher among obese and overweight women than among normal women. The likelihood of reporting itching or irritation as well as abnormal menstruation was almost four times higher among obese women than women with normal BMI. Multivariate analysis also confirmed overweight and obesity as a significant predictor of reproductive morbidity among women.

To conclude, the study found a strong association between obesity and several reproductive health problems among Indian women. Obesity is correlated with a substantial disease burden in reproductive health. Although the causal mechanisms remain elusive, these findings are useful for making predictions and planning health care at the individual level. Health care providers and policy makers need to pay urgent attention to develop effective policies and programmes to prevent obesity and associated reproductive health problems among adult Indian women. The health threat of obesity should be integrated within the general health system of India for its effective prevention and cure

Comparative Study of the Fertility Transition and Population Aging In Four Countries in the MENA Region

Hatam Hosseini

Department of Social Science, Bu - Ali Sina University, Hamedan, Iran

Email address: 'h-hosseini@basu.ac.ir'

Fertility transition is now underway in many countries of the Middle East and North Africa (MENA). Iran, Turkey, Tunisia and the United Arab Emirates are pioneers in fertility transition in the region. Considering differences in socio-economic and ethnic-cultural characteristics of these countries, a comparative study of fertility transition and the inevitable consequences of experiencing low fertility regime assume importance. The main objective of this study is to clarify the consequences of low fertility in the context of the fertility transition. Data used is mostly taken from the United Nations Population Division (2009). Results show differences in fertility experience of these countries during the last 60 years. Findings also show that countries are different according to the timing of fertility transition, the pace of fertility decline during the transition, and experiencing replacement or below-replacement level fertility does not coincide with the timing of fertility transition. According to the results, although the timing of transition from adolescence to adult age is different, population ageing will be the dominant phenomenon in the mid 21st century. Considering the prolonged process of policy making for ageing populations and the changing needs of the elderly, adoption of a comprehensive population policy in order to encounter consequences of low fertility and population ageing in the four selected countries is necessary.

Fertility Trends and Determinants in the Palestinian Territory

Mohammed Duraidi

Palestinian Central Bureau of Statistics, Ramallah, Palestine

E-mail address: MDURAI@PCBS.GOV.PS

Socio-economic factors play a significant role in determining the level of fertility and growth rate in a population. The experience of several less developed countries where population growth rates have recently lowered has well demonstrated this effect. An upward shift in socio-economic factors has played a crucial role in affecting these changes. Historically, changes in socio-economic factors have played very significant role in many European demographic transition societies. In the Palestinian case, we should add another factor, which is the political issue, which is as important as the socio-economic factors, in that the Palestinian-Israeli conflict has created a new issue – that of demographic conflict. Therefore, this study will concentrate on this conflict and its influence on the trends and patterns of fertility in Palestinian Territories. The statistics shows that Palestinian women's fertility levels are the highest in the world. Such findings call researchers to shed light on this fact by studying fertility levels by different socio-economic indicators such as education, use of family planning methods, age at first marriage, pattern of marriage, age at first birth, participation in labor force, desire to have sons, breastfeeding and child spacing in addition to studying different demographic characteristics such as age, refugee status, religion, type of locality etc. In examining the effect of political issues and intifada on the fertility of Palestinian women, I will study the Palestinian fertility trends, and the fertility differences between the Gaza strip and the West Bank. This paper will discuss the following hypotheses and issues: The impact of socio-economic factors and political issues on current levels of fertility in Palestinian territories. There are differences between the level of fertility of women residing in the Palestinian Territories and Palestinians living in Jordan, Syria and Lebanon. There is an expected decline in fertility levels in Palestinian Territories during the coming years. Further, there is a difference in the fertility levels of Palestinian women in Palestinian territories in relation to certain background characteristics (place of residence, the asylum situation, religion, age, etc.).

Correlates of Cohabitation and its Policy Implications in Japan, South Korea and Singapore

Hiroshi Kojima

Waseda University, Tokyo, Japan

E-mail address: kojima@waseda.jp

This study presents the results of a comparative analysis of cohabitation 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) and the 2005 Comparative Opinion Survey on Declining-Birthrate Societies (South Korea and Japan only), which were conducted by the Section for Measures against Declining Birthrate, Director-General for Policies on Cohesive Society, Cabinet Office (Japanese Government). It also examines the policy implications of the correlates in the three low-fertility countries. The results of logit analyses show that ages in the late twenties and forties and their interaction with higher education tend to have positive effects on current cohabitation and cohabitation experience in the three countries, while the main effects of higher education tend to be negative. The results of proportional hazards models reveal that premarital cohabitation tends to have positive (hastening) effects on the timing of marriage and childbearing among Japanese men and women as well as Singaporean women, while premarital cohabitation tends to have negative (delaying) effects on the timing of childbearing among female college graduates in Japan and Singapore but positive effects among male college graduates in South Korea. In sum, there does not seem to be too much commonality among the three countries in the determinants of correlates of cohabitation, except for a few between South Korea and Japan. The combination of countries and/or gender with common determinants often varies by correlate. Nevertheless, the negative effects of age and education on cohabitation and its correlates are found to be shared among the three countries. The policy implications of the results have been discussed.

International Fertility Change: New Data and Insights from the Developmental Idealism Framework

**Arland Thornton¹, Georgina Binstock, Kathryn Yount, Mohammad Jalal Abbasi-Shavazi,
Dirgha Ghimire and Yu Xie**

¹University of Michigan, Ann Arbor, Michigan, USA

E-mail address: ¹Arlandt@umich.edu

This paper is motivated by the substantial fertility changes that are occurring throughout much of the world. Several structural and ideational explanations have been offered for these fertility changes. In this paper, we focus on the influence of developmental idealism an important set of beliefs endorsing development, fertility change, and the causal connections between development and fertility. Developmental idealism is argued to be an important ideational force affecting both population policy and the family-related behavior of ordinary people around the world. Our purpose is to present new survey data from settings in six countries -- Argentina, China, Egypt, Iran, Nepal, and the United States -- about the extent to which the ideas of developmental idealism as they relate to fertility are believed in everyday life in widely diverse settings. We ask if individuals in these settings believe that fertility and development are correlated, that development is a causal force in changing fertility levels, that fertility declines enhance the standard of living, and that fertility declines lead to improvements in intergenerational relations. We also ask about people's expectations concerning future fertility trends in their countries and whether or not they approve or disapprove of the trends they expect. Finally, we ask the extent to which individuals in these six countries prefer very low fertility (one child) rather than somewhat higher fertility (three children). The data from each of these six settings show a widespread linkage in the minds of ordinary citizens between levels of fertility and development. That is, large fractions of people in these six settings believe that fertility and development are correlated and that fertility and development mutually affect each other, with the idea that fertility declines help foster development being especially important. Endorsements of low and declining fertility vary across settings, as do expectations of future fertility trends.

Changing Attitudes about Marriage and the Family in Japan:

A Longitudinal Perspective

Minja Kim Choe¹, Larry L. Bumpass², Ronald R. Rindfuss³ and Noriko O. Tsuya⁴

¹East-West Center, Hawaii, USA, ²University of Wisconsin, Madison, WI, USA,

³East-West Center & University of North Carolina, Chapel Hill, NC, USA,

⁴Keio University, Tokyo, Japan

Email address: mchoe@hawaii.edu

During the 2000s, Japan experienced numerous familial and workplace behavioural changes that might be expected to be accompanied or anticipated by changes in attitude. Examples of such behavioral changes include a continued increase in the postponement of marriage, increases in divorce and cohabitation, governmental concern over low fertility, and a profound movement by employers away from the "lifetime" model of employment security with its generous benefits and pay increases related to seniority. Given these changes, what have been the changes in the attitudinal climate in Japan? Attitudes are important in that they are the most commonly used indicators of values and normative environments, which themselves represent moral doctrine, and along with language and other symbolic elements, constitute culture.

This paper uses a unique longitudinal dataset that brackets the period from 2000 to 2009. The first round of the National Survey of Family and Economic Conditions (NSFEC) was conducted in 2000 and the follow-up in summer 2009. The initial round was a national, two-stage stratified probability sample of Japanese men and women aged 20-49. The analysis examines attitudinal change across a variety of family and family-work connections, at both the aggregate and individual level. Overall, we find that amidst the macro behavioral change, there is remarkable stability in average levels of attitudes between years except a few where there is change as discussed below.

It is all right for an unmarried woman to have sex: The largest change in the attitude variables is an increasing agreement among female respondents that it is all right for an unmarried woman to have sex. It is likely that this attitudinal change is a consequence of delayed marriage and increasing cohabitation, particularly just prior to marriage.

Helping with housework is one of the measures of a good husband: The significant increase in agreeing with this statement is found only among women, especially those with college education, and those in aged 30-34. It is likely that the change is related to increasing employment among married women of reproductive ages. In the context of continuing economic hardship, Japanese wives are, on the one hand, increasingly drawn into the labour force while they continue to shoulder a large share of household tasks and childcare, on the other.

Couples should stay together for the sake of children: There is an increase in those agreeing with the statement across all age groups and among both sexes. In the context of an increasing divorce rate in recent years, more people may have become aware of the potential problems associated with divorce.

A woman can have a full and satisfying life without marrying: There is a decrease in the percentage of respondents agreeing with this statement, which may be partially related to the recent economic downturn.

Does Dowry Affect Age at Marriage of Women? Some Evidence from Nepal

Nepali Sah

The Australian Demographic and Social Research Institute (ADSRI)
The Australian National University, Canberra, Australia
Email address: nepali.sah@anu.edu.au

The age at marriage of girls is gradually increasing in Nepal, but remains low in the Terai. Findings show that dowry, besides other socio-demographic factors, does influence age at marriage. Among several theories that explain the reasons behind the practice and escalation of dowry, son-preference, bequest theory, social status, marriage squeeze and female competition theories seem to be relevant to Nepal. Further, cross-border marriages between the northern states of India and the Terai seem to be strongly associated with dowry, and are increasing. The cross-country exchange rate puts both the Indian bride's parents and Nepalese groom's parents at an advantage when Indian parents marry their daughters to Nepalese grooms and vice versa. Conversely, Indian grooms' parents and Nepalese brides' parents would be in a better situation if they were to marry their sons and daughters within their own country. Because of the cross-border marriage phenomenon, Nepalese girls are further disadvantaged in the marriage market as they have to compete with Indian brides in terms of dowry.

Analysis of empirical data shows that age at marriage of girls and boys and dowry (paid for girls and received for boys) are significantly correlated (Pearson correlation 0.281 for girls and 0.262 for boys at $p < 0.001$). The mean dowry paid for a girl's marriage increased with an increase in her age at marriage (F-test sig. $p < 0.01$). The estimated mean dowry paid by age of the girl at marriage, calculated by MCA, also differed significantly. Further, the amount of dowry paid and received also increased with an increase in the educational level of girls and boys.

Findings of empirical data analysis revealed several factors associated with dowry. Among the prominent factors that were found significant in the multivariate analysis were age at marriage of girls, educational level, and caste/ethnic group. The amount of dowry increased substantially with an increase in the age at marriage of girls. Similarly, a higher dowry was paid for girls with higher education. The dowry prevalent among the Terai caste groups and Muslims was higher than that among the Hill caste groups.

The study confirms that due to the prevalence of dowry, girls are disadvantaged in the marriage market because of lack of a pool of marriageable men caused by caste endogamy and hypergamy forms of marriage. Parents are pressured due to the fear of increased dowry and marriage costs and hence arrange the marriage of their daughters at the earliest age possible. This study suggests the inclusion of dowry and marriage costs in future research on marriage.

Marital Dynamics in Rural West Bengal: A Case Study of Young Women

Sudeshna Ghosh¹ and Aparajita Chattopadhyay²

¹ORG (I) Pvt Ltd, Kolkata, India

E-mail address: ¹sudeshna27@gmail.com

The practice of early marriage in rural India is deeply rooted in cultural values and grounded in social structures. Despite laws prohibiting marriage before attaining the legal age, the practice is prevalent in the country. Early marriage has social, economic and health impacts on young brides. This paper attempts to assess the process of marital union, problems faced after marriage, adjustment mechanism in the new familial set-up, and psychological wellbeing. The paper also explores the culture of dowry, its effect on violence experienced, the level of marital happiness among young women and their correlates. Multi-stage sampling technique was used to cover a sample of 654 married women, 13-24 years in rural West Bengal, India. The study includes both quantitative and qualitative techniques. Focus group discussions helped to get issues regarding the marital union prevalent in that cultural set-up. Bivariate and multivariate techniques were used. Data collection was supported by Parkes Foundation, UK. The mean age at marriage was 16 years for women in the study area. Many of the women who felt preferred age at marriage is 18 years or more, did not know the reason for considering the age as preferable. Half reported of not having any mental preparation before marriage. One-fourth felt lonely; 10% were frightened and 14% were unhappy due to problems with in-laws, husband, and uncomfortable sex during the initial days in their marital home. One-third reported that they had adjustment problems in the first year of marriage mainly because of not knowing how to perform household chores, big family size and joint family type, and some personal issues. Responses to difficulties were broadly categorized into four major coping styles namely, emotional diffusing, cognitive appraisal, withdrawal and seeking help. Majority showed their reaction of emotional diffusing predominantly by crying. About 74% of the women reported material transactions (dowry) during their marriage. Four-fifths reported their parents had to go through stress to meet these demands. Fifteen percent had faced dowry-related violence, and half reported that though husbands were not involved in violence, they did not support their wives. To understand the effect of selected socio-economic, demographic and contextual correlates on the likelihood of having marital happiness, two sets of logistic regression models were used. Results indicate that the odds of having marital happiness were significantly higher among women with spousal education of secondary level or more, with less household workloads, spousal age difference of 5 years or more, and belonging to wealthier households. After considering all the conventional socio-economic and demographic variables, a set of six contextual variables were introduced in Model 2. Results indicate that the odds of having marital happiness were significantly higher among women who did not report any current adjustment problem, who could decide on spending the husband's income, had less spousal difference of opinion regarding selected conjugal issues, and who wished to have the same life partner, given a chance. No significant association of happy marriage was found with type of marriage (love or arranged) and husband staying with wife.

**Does Attitude towards Marriage Matter in Forming Marital Relationships?
Reciting the Intergenerational Experience from a Traditional Society of India**

Ravi Prakash

Karnataka Health Promotion Trust (KPHT), Bengaluru, India
E-mail address: ravistats@gmail.com

India is always characterized as a country with high marriage prevalence. But as time went on, Western ideologies of marriage found their way in India and some changes have been observed while forming marital relationships. Marriage rates are declining and the age at marriage is increasing steadily. These observations are not only from advanced societies but also from those societies where the social system runs on strong cultural norms. Although the advancement of education and aspirations of better careers are leading cause of increase in age at marriage, undoubtedly the emergence of Western culture and ideologies are bringing about changes in the perceptions and attitudes of young adults towards marriage. Some studies have shown that different people carry different attitudes towards marriage and accordingly they decide about the age of entry into wedlock (Botkin et al. 2000, Parkar and Vassallo 2009, Barber and Axin 1998, Whitehead and Popenoe 1999). In Indian culture, marriage was never viewed as a burden or the personal virtue of an individual in olden days but the recent socio-economic development of society shows a glimpse of such notions among young individuals wherein they view marriage from a different perspective. This study is a unique attempt to provide the answer to the question: Does attitude towards marriage really matter while initiating the marriage discussion and is it responsible for the current postponement in marriage age?

This study utilizes primary data collected from the urban areas of Varanasi district of Uttar Pradesh, India, as a part of the author's doctoral research work. Data was collected from 519 households and 544 individuals of different categories like married males, unmarried males, married females and unmarried females. Other than that, information was also collected from the parents of these respondents to assess the intergenerational changes in meaning and attitude towards marriage. Mean age at marriage was taken as the dependent variable and one-way analysis of variance was used to check the significant difference in marriage age according to the individual's attitude towards marriage. Moreover, we have also analyzed across generations, how attitude towards marriage has changed and its effect on age at initiation of marriage discussion and age at first marriage, using multiple linear regression analyses.

Findings reveal a significant increase in the extent of unfavourable attitudes towards marriage ($p < 0.100$) across generations. While parents viewed marriage as a means of providing social stability, their children perceived marriage as a way of satisfying various social and emotional needs. The extent of unfavourable attitude towards marriage was relatively higher among females and mostly among unmarried females. Findings clearly show that the preferred as well as actual mean age at marriage was significantly higher among those respondents who had unfavourable attitudes towards marriage than those who had favourable attitudes. We conclude that along with socio-economic development of society, the emergence of unfavourable attitudes towards marriage among young adults is an important change to notice, and that this change is also responsible for the current postponement in marriage age.

Mortality in India during the Last Two Decades: A Fresh Exploration

Nandita Saikia¹, Abhishek Singh² and Faujdar Ram³

International Institute for Population Sciences, Mumbai, India

E-mail address: ¹nanditasts@rediffmail.com

The recent trend in mortality decline recorded by the Sample Registration System (SRS) shows a slowdown in mortality improvements particularly since the mid-nineties. According to official life tables of India constructed by the Registrar General of India (RGI), there is a stagnating trend in infant mortality and an increasing trend in female child mortality (4q1) in India and some selected states. The ratio of child mortality rates (4q1) to infant mortality rates (1q0) obtained from these life tables during the recent period does not follow any of the model life table patterns (patterns observed in other human populations across the globe), which raises questions about the reliability of these rates. The 4q1 values which are one of the crucial terms of a life table are inconsistent with the age-specific death rates (4m1) obtained from published SRS reports and this error has translated into underestimation in life expectancies at birth in the published life tables. We construct new life tables since the nineties using age-specific death rates from SRS, and using the methodology followed by the SRS. The constructed life tables show lower levels of child mortality rates for India and all major states compared to those provided by the SRS and the ratio of child mortality rates (4q1) to infant mortality rates (1q0) align with the global mortality patterns. The reconstructed life tables clearly show that the life expectancy at the national level for females and males are higher by 2 years and 1 year, respectively, compared to those published in the SRS life tables for the most recent period. In some states, the error is even higher. As is used by researchers working in various disciplines, it is important to use correct values of life expectancy at birth.

Estimation of Zero Maternal Mortality: A Bayesian Approach

Shilpi Tanti¹, Brijesh P Singh² and K K Singh³

¹ DST-CIMS*, Department of Statistics, ² DST-CIMS, Faculty of Commerce, and ³ DST-CIMS,
Banaras Hindu University, Varanasi, India
Email address: shilpi.tanti@gmail.com

For an event that is conceivably possible but has not yet occurred that is, the case where prevalence rate is very small and we want to estimate the probability of occurrence of the event, we may use the rule of three or Bayesian approach. In this study, we have made an attempt to apply the technique of zero numerator problems in the field of demography. In demography, maternal mortality is a very rare event. A probability model for this issue can be built by a binomial distribution with sample size n and probability p , which is usually very small. Bayesian models typically use beta and uniform priors for binomial distribution, and the posterior distribution depends heavily on the values of the parameters used in the priors. Choosing the parameters is a hard task that needs more attention. The numerical results of the study show that the traditional way of assessing a prior is not suitable for zero-numerator problems due to the sensitivity of the priors. The Bayesian approach represents uncertainty about a probability and allows us to update our information.

* *Department of Science and Technology - Centre for Interdisciplinary Mathematical Sciences*

**Can We Consider the Ratios $e(x+5)/e(x)$ over Age as an Indicator of Age-pattern of Mortality?
Is the Ratio $e(10)/e(5)$ a Universal Constant?**

Subrata Lahiri and Kaushlendra Kumar

International Institute for Population Sciences (IIPS), Mumbai

Email address: subrata.lahiri@yahoo.com

The following exact mathematical relationship holds good among three ratios based on the usual life table notations, viz., $p(x, x+5) = S5(x+)/E(x, x+5)$, where $p(x, x+5) = l(x+5)/l(x)$, $S5(x+) = T(x+5)/T(x)$ and $E(x, x+5) = e(x+5)/e(x)$. Keeping in mind the definition of life expectancy at age x [$e(x)$], the quantity $1 - E(x, x+5) = [e(x) - e(x+5)]/e(x)$ may be treated as an indicator of relative change in (future) overall mortality prospects of a cohort of persons aged exactly x as it reaches the exact age $x+5$ under the assumption that the cohort (unaffected by migration) is exposed to a fixed set of age-schedule of mortality throughout the whole life span.

An empirical investigation using various sets of model life table systems, proposed by Coale and Demeny (1983) and United Nations (1982), shows that the range of variation in $E(x, x+5)$ values for a specified age over various mortality levels [$e(0)$] is quite small compared to that of $S5(x+)$. More specifically, the variation in the individual $E(x, x+5)$ values beyond age 5 is so narrow that it could be regarded as almost steady within a broad range of mortality levels in contrast to those of $S5(x+)$ values. However, the age-pattern of $E(x, x+5)$ values varies over various model mortality patterns. Thus, the age-pattern of $E(x, x+5)$ values can be used to identify a specific model mortality pattern.

In sharp contrast to the variation in the values of $E(x, x+5)$ at individual ages, measured in terms of '*Mean Deviation relative to Median*', $E(5, 10)$ is for all practical purposes, a constant over the various mortality levels and mortality pattern as well. The analyses on the basis of various measures on deviations of the values of $E(x, x+5)$ at various quinquennial ages beyond age 5 from some fixed points, such as, '*Maximum Deviation Relative to Mid-Range*', '*Coefficient of Variation*' and '*Mean Deviation Relative to Median*', indicate that the values of $E(5, 10)$ over various mortality levels and patterns remain almost unaltered compared to those of other $E(x, x+5)$ values in the context of different sets of model life table systems. Thus, $E(5, 10)$ value may be treated as a universal constant.

Compression and Decompression Patterns of Mortality in India and Major States

Suryakant Yadav¹ and P. Arokiasamy²

International Institute for Population Sciences, Mumbai, India

E-mail address: ¹suryakant11@gmail.com

India is experiencing an accelerated pace of demographic transition. Contemporaneously, the country is also experiencing epidemiological shifts. Infant and crude mortality rates have declined to 55 and 16 respectively (SRS, 2007). Over time, the decline in mortality rates at younger ages has led to the flattening of mortality curves. At the same time, the outward shift in mortality curves has also been witnessed. The mortality rates of the oldest of old is declining and subsequently, it seems that Gompertz and Exponential does not hold in the case of the oldest of old. Researchers have been discussing these dynamic changes in mortality patterns over time. Tuljapurkar (2005, 2009) has explicitly mentioned the preference of distribution of death instead of age pattern of mortality, as comparisons of mortality rates contain the same information as the comparison of distribution of age at death. Wilmoth and Horiuchi (1999) have suggested Inter Quintile Range (IQR) and its decomposition by age group for establishing compression and decompression patterns using the distribution of age at death and thus, to estimate the variability at age at death. Further, Kannisto (2000) has given the C-family (C50) method to establish the compression and decompression pattern, using the fact that in older age groups the distribution of age at death follows a normal curve. Given this background, this study attempts to study the dynamics of changes in mortality patterns and establish the compression and decompression patterns of mortality in India and major states using IQR and C50 methods. Data from SRS provide information on the age specific death rates (a.s.d.r). Analyses show that the both methods are applicable to India. However, with limitations of data and subsequent changes in the distribution of age at death over time, IQR has been used for the period 1970 -2006 and C50 has been used for the period 1995 to 2006. Findings obtained by both methods reveal that the variability of distribution of death has decreased over time. The variability in age at death is found to be convex in nature. Additionally, with decrease in variability there is an increase of 5.8 years in mean length of life; variability (SD) decreased by 2.7 points in the third quintile and by 0.76 points in the first quintile during 1970 to 2006. About 50% of deaths were concentrated in 19 years in the normal curve of distribution of age at death during 2004-2006 compared to 23 years in past (1995-97). In the initial stage, 50% of deaths were concentrated within a span of 44 years in the distribution. To conclude, in India, compression of mortality is evidenced with increase in life expectancy. Gender differentials persist with females having more compression than males.

An Analysis of Changing Living Arrangements of Elderly in India

Preeti¹ and Ladusingh Laishram²

International Institute for Population Sciences, Mumbai, India

Email address: pdhillon_maths@yahoo.co.in

Several studies suggest that the process of demographic transition, urbanization, industrialization and occupational restructuring, coupled with social and spatial mobility, the emergence of the small family norm, individualism and soon have a significant effect on the life of the aged. With younger women increasingly entering the labour force, the availability of caregivers for older persons has been decreasing. Besides, out migration of young people from rural areas leaves behind many older persons without caregivers. Evidently, in the process of a growing ageing population and substantive changes in household structure, family support for the elderly is becoming a critical challenge. In many countries of the Asia-Pacific region including India, the family continues to support its elderly members; the traditional older person co-residing with family members is generally the norm. However, in most societies, as traditional means of family support get steadily eroded, governments urgently need to establish a societal protection system for the aged. With this view, this study researches the question: is the Indian family support system for elder care worsening with the demographic and socio-economic transition?

Findings suggest that in India, the percentage of the elderly living alone, although small, has increased significantly. In fact, rural India has a high headship rate of the elderly. Households headed by females increase with advancing age due to the higher number of widows than widowers among the elderly. Nuclear families are also more likely to be found among the younger elderly compared to the older elderly. In line with general trends associated with large social transformations, India is expected to have an increasingly large proportion of nuclear families in the near future. So also, proportions of the elderly living alone are expected to increase, especially in rural India. Further analysis has been performed in the high ageing state of Kerala in south India.

The study points to the need to strengthen old age policies for public-private support in the coming years as living arrangements of the elderly will cause serious concern as the demographic and socio-economic transition progresses, particularly in rural India and Kerala.

**Intergenerational Support and Depression Among the Elderly in Rural China:
A Longitudinal Investigation from Chaohu**

Ping Wang¹ and Shuzhuo Li²

School of Management, Xi'an University of Science and Technology, Xi'an, China

E-mail address: ¹wplqym@163.com

The migration of working-age adults from rural China 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 includes financial support, instrumental support and emotional support received and provided from and to adult children (including grandchildren), on the changes of depressive symptoms in older adults in rural China, over an 8-year period.

Data were derived from a 4-wave longitudinal survey, Well-being of Elderly in Anhui Province, China, 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 individual parents, respectively, aged 60 and older living in rural Anhui Province, China. We used Hierarchical Linear Model (HLM) to estimate the influences of financial support, instrumental support, assistance with household chores and personal care, and emotional support on changes in depressive symptoms of older parents.

Results the after controlling for the needs of the elderly, increasingly, financial support received from adult children, assistance with household chores provided to adult children (including to grandchildren) and emotional support between the elderly and adult children reduced depressive symptoms of the elderly more strongly. However, increasingly, personal care received from adult children increased depressive symptoms of the elderly more rapidly. And there were no steady relationships between other time-varying supports and changes in depressive symptoms of the elderly. In addition, there was no significant trend of depressive symptoms of the elderly over time, but there were some significant influences of the controlling variables, such as a son living with the elderly in the same village at least, living arrangement and the health status of the elderly, on the changes in depressive symptoms. In conclusion, the study suggests that the benefits of intergenerational support are conditioned by culturally prescribed expectations. Implications are discussed in the context of the corporate Chinese family, characterized by mutual aid and interdependence across generations, under conditions of social change. Results support a corporate / mutual exchange model of the rural Chinese family in which intergenerational transfers are reciprocal and multiple family needs are met. Under the background of migration of working-age adults, there are certain actual meanings of the results on the effects of public policy analysis and construction of the social support system.

Vulnerability and Deprivation among Elderly Widows in India: A National Level Analysis

Sangeeta Kumari¹ and T V Sekher²

International Institute for Population Sciences, Mumbai, India

E-mail address: ¹ sangeetasargam@gmail.com

The proportion of the elderly in the Indian population has been rising steadily, with women outnumbering men. Out of 77 million elderly (60+ years), about 20 million are widows, constituting about 51% of all elderly women. In India, 51% of elderly women live without a spouse as compared to 15% of elderly men. There may be two reasons for the gender disparity in widowhood – the longer life span of women compared to that of men and the general tendency of men to marry women younger than themselves. Widows, in general, occupy very low social and economic status in Indian society. Older women are doubly vulnerable due to the combined effects of ageing and widowhood. Widowhood is a problem of many dimensions. Widows face discrimination on socio-economic and cultural grounds. Elderly widows constitute a special group in Indian society because of deprivation, vulnerability and low social status. India's National Policy for Older Persons assures the elderly that their concerns are national concerns and they will not live unprotected, ignored or marginalized. The policy aims to strengthen their legitimate place in society to live their last phase of life with purpose, dignity and peace. However, the special needs and requirements of widows have not been given enough attention in welfare policies and programmes. Based on a nationally representative sample survey conducted by NSSO in 2004-05, covering 34,831 aged persons of which 13,278 are widowed, this paper examines the extent of vulnerability among widows in terms of their health condition, economic status and living arrangements. Three-fourths of the widows were economically fully dependent on others. About 12% of the elderly widows in rural areas were forced to live alone; this is much higher than the proportion of elderly widowers who live alone. This gives a clear indication of the lack of familial support and increasing vulnerability of elderly widows. Moreover, more than half of the widows had no property in their name which makes them extremely vulnerable. About 14% of widows in rural and 8% in urban areas stated that they faced difficulties in meeting the basic necessities of life such as food, clothing and medicine, and nearly one-third considered their health status to be very poor. Thus, findings indicate that widows are more vulnerable in all aspects in comparison to widowers. The gradual disintegration of joint families, which were the major caregivers and support mechanism for the aged and particularly for widows in India, has added a new dimension to their vulnerability. These findings assume importance in the absence of any social security schemes for aged widows in India. While formulating policies and programmes for the welfare of elderly widows, the government needs to address the issues related to their specific problems and levels of deprivation.

Women's Education and Labor Force Participation in Iran

Amir H Mehryar¹ and Shirin Ahmad-Nia²

¹Institute for Research on Development Planning, Iran ²Allameh Tabatabaee University, Tehran, Iran

E-mail address: ²shirin-ahmadnia@gmail.com

Since its establishment in 1979, the Islamic Republic of Iran has followed a dual approach to women's education and labor force participation. On the one hand, following Islamic teachings on the obligation of Muslim men and women to seek knowledge, educational opportunities for women have been expanded and young girls have been encouraged to pursue formal education to the highest level possible. On the other hand, due to Islam's emphasis on family formation and childrearing as the main role of women, women have been discouraged from entering the formal labor market. This contradictory policy has resulted in a tremendous rise in women's level of education and human capital while their labor force participation rate (LFPR) has remained at the very low level of 12.5% attained in 1976. The aim of this paper is to briefly review the trend of changes in Iranian women's education and labor force participation during the fifty-year period 1956-2006, and present a detailed picture of their current level of education and labor force participation as revealed by the 2006 census. The main findings of the trend analysis are a significant rise in women's level of education since 1979 leading to virtual disappearance of gender based discrepancy in literacy rates and women outnumbering men in passing university admission examinations during the recent years. With regard to labor market participation, however, the last two censuses show some decline in the LFPR of total population and men, mainly due to the tendency of a large proportion of youngsters aged 10-24 to continue their studies beyond age 15. The LFPR of women in 2006 (12.65%), although higher than those of 1986 and 1996 censuses, is still slightly lower than the level reached in 1976. Due to the tremendous increase in population size, the number of working women in 2006 was more than twice that of 1976 census. Women with secondary and higher education show higher rates of labor force participation which are still much lower than those of men with similar levels of education. Moreover, the unemployment rate of women with a university degree is almost twice that of university educated men. Ironically, the gender segregation policy adopted since the revolution has led to creation of new employment opportunities for women. The majority of non-working women are identified as home makers. Thus, even if the human capital of highly educated Iranian women is not used in the formal labor market, it is used in the rearing of the next generation. An increase in educational opportunities for women has also resulted in a significant rise in the mean of age of marriage and has thus contributed to fertility decline in Iran.

The rise of temporary migration of rural married women and its effect on non-farm employment rates for all temporary migrant women of rural origin in China, 1990-2005

Jiajian Chen¹, Robert D. Retherford², Xiru Li³ and Hongyan Cui⁴

^{1,2}East-West Center, Hawaii, USA; ^{3,4}

Email Address: chenj@eastwestcenter.org

In response to China's rapid economic development, there has been a huge upsurge in internal migration mostly from poorer rural areas to wealthier areas in coastal provinces in which China's rapid economic development has concentrated. Most of this migration is temporary, and an increasing proportion consists of rural married women who migrate for non-farm employment, . The recent increase in the temporary migration of rural married women for non-farm employment suggests an important change in the traditional pattern that most female rural-to-urban migrants are young, single, eventually return to their home village to marry, and stay at home to assume domestic duties and agricultural work.

Rural migrant women's participation in non-farm work has great importance in understanding their changing position due to increased economic opportunities. The increase in participation of rural women, especially married women, in non-farm work activities outside their households and villages has been viewed as a necessary condition of their improved status. However, the extent to which this recent change in their temporary migration has contributed to the change in non-farm employment remains understudied.

The study uses data from China's 1990 and 2000 censuses and the 2005 mini census to assess the changing patterns of inter-provincial migration and changing non-farm employment rates among rural migrant women. The study focuses on the changing relationship between temporary migration of rural women and their non-farm employment. More specifically, it examines the extent to which major increases in the rate of temporary migration of rural married women have contributed to increases in the rate of non-farm employment among all rural migrant women in China.

Findings show that changes in the demographic distribution of migrant women, especially increases in the proportion of those currently married who have migrated for reasons other than marriage, contribute more to the overall increase in non-farm employment rates than does the increase in the proportion of currently unmarried women among interprovincial temporary rural migrant women. The paper discusses the strong implications of the substantial increase in interprovincial temporary migration of rural married women and its contribution to the increase in their non-farm employment on the family's strategy for migrating from the place of origin and for improving the position of rural women.

**Does Men's Education Matter for Women's Autonomy in India?
An Investigation of National Family Health Survey-3 data**

**Sateesh Gouda and Ravi Prakash
Email address: sateeshgouda@gmail.com**

Women's empowerment remains incomplete unless and until it leads to strengthening the agency of women's autonomy. Historically, women have been looked down upon in various social arrangements. They have not got adequate opportunity to exercise their rights in the public domain and remain neglected in almost every sphere of life. They have the least power and control over their own bodies and lives. Consequently, they remain voiceless within the familial periphery, and also beyond that. Undoubtedly, education is a potent tool in emancipating and empowering women. It is the single greatest factor that can improve the status of women in any society.. There is no doubt that education enables women not only to gain more knowledge about the world outside her hearth but helps her to get status, positive self-esteem, self-confidence, and the necessary courage and inner strength to face challenges in life. Apparently, it also helps them to procure a job and supplement the family income and achieve social status.

Experience elsewhere acknowledges the importance of education in bringing about women's empowerment; however there is a dearth of literature on the role of men's education in empowering women. In spite of the fact that in the developing world, control over all the activities of women remain in the hands of men (the father, father-in-law, husband, brother, and later, her son), empowering women on one hand, involves making them self-dependent and financially independent to the extent that they can demand and exercise their rights; and on the other, it is equally important to motivate men to support the women in their lives to get empowered. Hence, involving men in women's empowerment is a crucial component of the whole empowerment process. Therefore, this paper makes an effort to understand the role of men's education in women's autonomy. Thus, it assesses differentials in the level of women's autonomy if both spouses are literate, if both are non-literate, if the husband is literate and wife is non-literate, and the husband is non-literate and wife is literate.

The study used data from the third round of the National Family Health Survey (NFHS-3). The level of autonomy was assessed based on decision making by the woman regarding her own health care, major household purchases, purchases of daily households needs, and visits to her family or relatives. Multivariate logistic and ordinal logistic regression model were employed to understand the effect of men's education on women's autonomy after controlling for the effect of several other confounding variables.

Findings suggest that literate men in rural areas were more likely to favour women's autonomy than their urban literate counterparts. Women's autonomy was relatively higher if both spouses were literate, and increased with the increase in men's education. Further, the chances of women's autonomy being greater were significantly higher for better educated men, after adjusting for the effect of other confounding variables. Thus, men's education is one of the important predictors of women's autonomy and is positively associated with the level of women's autonomy.

Fertility decline and increasing women's labor force participation in Iran

Majid Koosheshi¹ and Hossein Mahmoudian²

University of Tehran, Tehran, Iran

E-mail address: ¹hmahmoud@ut.ac.ir

Iran has experienced a sharp decline in fertility during the last two decades. The fertility rate decreased from about 6 children per woman in 1986 to about 3 in 1996, and to less than 2 in 2006. At the same time, the women's labor force participation rate has risen from about 8% in 1986 to about 12% in 2006. However, it should be kept in mind that the women had a relatively high unemployment rate (23%) in 2006. The low level of increase in the labor force participation rate cannot be significantly attributed to the fertility decline. In addition, the increase has taken place along with the pace of fertility reduction. The labor market depression during the fertility decline, which limited employment opportunities for women, could have played a crucial role in this regard. The approach based on an inverse relationship between fertility and women's labor force participation, at individual level, would not be able to explain the situation in Iran during the reference period. Therefore, the main question of this paper is how changes in the level of fertility and its proximate determinants, like delays in marriage and birth intervals from marriage to the first birth, have affected women's presence in the labor market. The analysis is based on data from Iran's 1986, 1996 and 2006 censuses. Changes in the gross years of active life, labor force participation rates and unemployment rates reflect a major increase in labor supply for women aged 15-35 years. Therefore, despite the labor market depression, the changes have given women proper opportunities to be more active in the labor market.

The Influence and Impact of Nation-State Policies on Migration from India to Australia

Natalie Fuller and Graeme Hugo

University of Adelaide, Australia

Email address: natalie.fuller@adelaide.edu.au

Escalating migration from India to Australia has seen the India-born Australian population nearly quadruple in the 15-year period from 1996 to 2009. The India-born immigrant community is now the fourth largest overseas-born population group in Australia. Reporting on findings of focus groups and interviews conducted with recently arrived India-born migrants, this paper critically analyses the efficacy of international migration theories in explaining contemporary patterns of international migration. The paper argues that a key driver of migration, which is missing from most theoretical considerations, is the affect of nation-state migration policies. This is of particular relevance given increasing competition between developed countries to attract skilled migrants to meet current and anticipated future skills shortages. It is contended that immigration policies introduced since 1996, particularly those encouraging temporary skilled workers, overseas students and onshore processing of applications for permanent residency, have played a significant role in the dramatic increase in the number of India-born persons migrating to Australia. However they have not necessarily achieved the intended policy outcome of maximizing human capital to address skills shortages, with many new arrivals experiencing barriers in finding employment commensurate with their qualifications and expertise. In addition, the relative ease of obtaining a student visa, whilst resulting in a boon to the Australian education market, has had unintended consequences of providing a migration pathway for less skilled immigrants. This, in turn, has led to more recent policy changes which have seen a tightening up of criteria for permanent residency as well as student visas. An assessment is made of the impact of these recent policy changes – coupled with the impact of reports of violence against Indian students in Australia and the sudden closure of a number of Australian educational institutions – on current and likely future migration from India to Australia.

Bangladeshi Immigration in West Bengal, India: A Study of Characteristics and Adjustment Process with Special Reference to South 24 Parganas District

Ashok Kumar

International Institute for Population Sciences (IIPS), Mumbai, India

E-mail address: ashok_iips@yahoo.com

Bangladeshi immigration into India has multidimensional aspects, economic, political and ethnic. From a historic point of view, Bangladeshi immigrants are said to have been brought to Eastern India primarily to fulfill certain economic needs; later, politicians utilized them as their supporting elements and still later, it became an issue of ethnic and religious sentiments. However, political importance still predominates the continuous flow of immigrants into West Bengal State of India. Being a rising ethnic issue, the immigrants' adjustment in the host society is becoming difficult; in fact, both illegal and legal immigrants are facing problems of adjustment. The feeling of being a foreigner and fear of communal riots and ethnic conflicts are high among illegal immigrants. Besides, interactions at the community and societal level, and friendship patterns with local people are weak among illegal immigrants; most of them are weakly adjusted or not adjusted at the individual (psychological), communal and societal level; for most immigrants, the adjustment process is in transition and close to the non-adjusted type. Experience of ethnic conflict, local language skills, status (legal/illegal) and educational level are the major determinants of the immigrant's adjustment process.

Immigrant households were selected with the help of local people to ensure their illegal and legal status.. No systematic sample design was used for selection. In some cases, local people became suspicious of the immigrants' status and refused to become respondents while in some others, respondents refused to give answers. In such situations, the only option was to go to the next household. In each household, the head of the household was interviewed. A total of 400 formal interviews were successfully conducted in Diamond Harbour Block, South 24 Parganas District. Out of them, 200 were conducted in Sultanpur village and 200 in Ward No. 10 Ravendra Nagar urban area.

Logistic regression revealed that the important determining background variables for adjustment included education, status, language skills and experience of ethnic conflicts. Immigrants who had more than primary level education and only primary level education were respectively, .2 times and 3.1 times more likely to adjust as compared to illiterate immigrants (significant at $p < .001$ and $p < .01$ levels, respectively). Legal immigrants were 3.7 times more likely to adjust than illegal immigrants (significant at $p < .001$). Findings further showed that immigrants who had not experienced any ethnic conflicts were 3.4 times more likely to adjust than immigrants who had experienced such conflicts (significant at $p < .001$). Similarly, those Bangladeshi immigrants who could speak Assamese were 2.3 times more likely to adjust than immigrants who could not do so (significant at $p < .01$ level).

Cross-Border Immigration in North-East India: A Case of Immigrant Workers into Assam

Rikil Chyrmang

Centre for Development Studies, Trivandrum, India

Email address: rikilenator@gmail.com

During the last three decades, the issue of cross-border migration in North-East India particularly in Assam, has been unprecedented in nature and intensity. Migrations are motivated by both 'push' and 'pull' factors, and are of different types; cross-border migrants may be permanent migrants, labour migrants, refugee migrants or illegal migrants. While cross-border migration is a worldwide phenomenon, it has become a highly sensitive issue in Assam as it inevitably refers to illegal migration from neighbouring countries, especially Bangladesh. Further, in spite of its sensitivity, people have attempted rage debates on the issue resulting in the accumulation of a sizable volume of literature on illegal migration. Hence, in this study, we have not considered this aspect; instead, we deliberate upon the issues of immigrant workers, further justified by the dearth of literature on the subject. .

This study is an attempt to explore some dimensions of the phenomenon of cross-border migration: understanding its causes and consequences, the rights of the migrant workers, and the steps forward that could help in promoting their well-being. Secondary information collected from the Census of India and the International Labour Organization (ILO) has been used to address some of these issues.

Findings show that 73% of the immigrant workers, by place of last residence in Assam, are engaged in agriculture and allied activities, 6% in industry and 21% in services. Interestingly, while the percentage of female migrant workers in agriculture and industry, in both rural and urban areas, is greater than that of their male counterparts, the reverse holds true for the service sector, with higher percentages of males than females engaged in both rural and urban service sectors. Overall, more rural than urban migrant workers are engaged in agriculture related activities. The low agricultural wage rates in Bangladesh as compared to India make Assam, the nearest place rich in agriculture and natural resources, a preferred destination. The continuous influx of illegal immigrant workers into Assam, however, is resisted by the local citizens for fear of job competition. While the Government of India has instituted , the Internal Migrations for Workmen Act, 1979, to ensure work entitlement and protect the welfare of migrant workers. However, there is no separate policy except the Foreigners Act, 1946.

Our findings suggest the need for enhancing bilateral and multilateral discussion among sending and receiving countries to assess the needs of immigrant workers.

Maternal Health Care in Bangladesh: Recent Use Pattern, Issues and Challenges

Sharifa Begum

Bangladesh Institute for Development Studies, Dhaka, Bangladesh

Email address: sharifa@sdnbd.org

Bangladesh has experienced a rapid reduction in infant and child mortality over the past three decades but its achievement in reducing maternal mortality has been rather slow during this period. This has made maternal mortality and morbidity, matters of high concern in the country; the country's current maternal mortality of 320-400 is considered one of the highest in the world. Maternal health being high on the agenda, the ongoing health, nutrition, and population sector programme (HNPS) of the country has adopted sustainable improvement in maternal health, particularly that of vulnerable women, as one of its major goals. The strategies adopted to achieve this goal are to strengthen the provision of maternal health care including essential (including emergency) obstetric care, antenatal/delivery and postnatal care, promote contraceptive practices, reduce unsafe abortion practices, accredit facilities as women friendly with provision of services for women subjected to violence. In this backdrop, the present paper examined the recent use pattern of maternal health care services in Bangladesh by different segments of women, recent trends in the use of these services following the renewed emphasis on provision of such care, major sources supplying such care to women, and recent changes, if any, in this regard following the Government's renewed commitment, and finally, to try to identify and understand the challenges and issues that associate use of these services by women, particularly poor and underprivileged women who face the highest maternal risk. The study focused on the recent years since 2004, which marks the launch of the ongoing HNPS in the country and examined women's utilization of antenatal, delivery and postnatal care which holds the key to improving maternal health in Bangladesh. The data utilized for the study came from recent rounds of the Bangladesh Demographic and Health Surveys (BDHS) namely, those collected in 2004 and 2007. The broad observations from the data are somewhat discouraging; despite emphasis, women's utilization of maternal health care remained very low with progress being very slow in this regard. More ominously, the recent improvement in this has remained confined totally to the well-off section and has resulted in the neglect of poor underprivileged women. In recent years, the situation has shown some deterioration, rather, for poor underprivileged women. For supply provision, the recent years are characterized by few anti-poor developments such as high and growing importance of qualified doctors, to the neglect of other lower level professionals, and aggressive expansion of the private sector to the neglect of the public sector. These developments while in large part may be responsible for the recent adverse outcomes in maternal health care use, may pose challenges for the future too.

Family Planning Service in Low Fertility Era

Zheng Zhenzhen

Chinese Academy of Social Sciences, Beijing, China

Email address: zhengzz@cass.org.cn

For populations after the first demographic transition, not only does fertility and natural increase remain low, but fertility patterns also change. As the number of children born decreased from over five to only one or two, and the time of pregnancy and childbearing extended from pre-marriage to age 40 or older (due to premarital cohabitation and delayed childbearing) with a higher demand for the effectiveness and convenience of contraceptives, and a more conscious decision on the timing of pregnancy and childbirth, the coverage and scope of family planning services should also change accordingly to meet the emerging needs. Indicators such as fertility and contraceptive prevalence may not be sensitive and effective indicators in low fertility circumstances. The concepts and approaches need to be reframed for assessing service needs, designing service programmes, planning activities, and evaluating the outcome and impact of family planning.

Using China as an example, the objectives of this paper are to compare differences in family planning needs before and after demographic transition; discuss issues of unmet need under the new demographic, social and economic context; and suggest a framework and a set of indicators to plan and assess family planning services. The study reviews existing publications, and discusses the family planning needs of women and men in the reproductive ages in a parity specific approach and in consideration of the individual's childbearing plan and intention. Gender perspective is an important element in constructing the framework. Information from national family planning surveys as well as smaller scale specific surveys are utilized, and cases and personal observations from national RH/FP Quality of Care Projects are also used to obtain an in-depth understanding of service needs.

The paper suggests that potential clients of family planning should be women and men in the reproductive age regardless of their marital status, rather than focusing on serving married women who have not completed childbearing (since the ultimate goal has been to control population growth). The size of the target population would more than double if unmarried and adolescent groups are included, and husbands also need to be counted if they are expected to participate in family planning. The potential needs and task of family planning services has been under-estimated for populations of post-demographic transition. With the goal of realizing the individual's reproductive intentions in a healthy way for different demographic, social and economic groups, the current capacity and skills of the family planning service programme are far from satisfactory.

Timing of Initiation of Contraceptive Use in India and its most Populous State, Uttar Pradesh

Rohit Kumar Singh and Chander Shekhar

International Institute for Population Sciences, Mumbai, India

Email address: singh.rohitsingh7@gmail.com

Family planning programmes have played an important role in reducing fertility in many countries. Since the focus was to promote contraceptive use among couples; contraceptive prevalence was used as an indicator to evaluate the implementation of family planning programmes. However, as contraceptive use increased and became strongly established in societies, it is recognized that its success cannot be adequately measured only by an increase in the contraceptive prevalence rate. The initiation of reproduction-related activities has serious implications for reproductive health status. Understanding the factors associated with each of the different reproductive transitions including contraceptive use are critical for the design and implementation of programmes aimed at improving these outcomes. While early initiation of sexual and reproductive activities are associated with poor reproductive health outcomes, early initiation of contraceptive use is associated with improved outcomes such as reduction in levels of unplanned pregnancy. The timing of initiating contraceptive use that is, first-time use of a family planning method after initiating sexual activity and after the first birth are important dimensions of effective regulation. Specifically, the postpartum family welfare programme, known as the international postpartum programme, was initiated in 1966 by the Population Council, on the premise that it would be convenient to women as well as workers to provide a method immediately after childbirth. This paper attempts to examine the timing of initiation of contraceptive use at first time and after recent childbirth among currently married women, and the relative risk associated with initiation of contraceptive use by socio-economic and demographic characteristics. We tested the hypothesis — whether women who do not want any additional child initiate contraceptive use early. Three rounds of NFHS data have been used. Cox-regression model has been used to analyze calendar data. The study reveals that a large proportion of younger women started using a method before having a child. More than three-fourths of the women (15-19) began to use a family planning method when they had fewer than two surviving children, whereas most of the older women waited until they had at least two surviving children. Interestingly, for illiterate women, the acceptance of family planning at 3+ living children as first use has gone up from 38% to 43% during 1992 to 2006. A small proportion of women in UP who have a smaller number of children were using spacing methods. Nevertheless, contraceptive use is high among younger women. Prevalence of limiting method users was observed to increase over the period in India, and a sizable percentage (35%) of women had undergone sterilization in month of their last birth whereas the percentage of limiting users in UP who had accepted sterilisation in the same month as their last birth was very low. Results of multivariate analysis suggest that programme variables like antenatal care and place of delivery (institution) affect the relative risk of initiating the use of a contraceptive method after childbirth.

**Ethnic Differentials of the Impact of Family Planning Programme on
Contraceptive Use in Nepal**

Sharad Kumar Sharma¹, Naresh Pratap K C and Dhruva Raj Ghimire

Directorate of Health Services, Family Health Division, Kathmandu, Nepal

Email address: ¹ghimires2002@yahoo.com

There is wide variation in the use of family planning services among ethnic groups in Nepal. Despite three decades of programme implementation, the need for family planning services is largely unmet (25%) and systematic studies evaluating the impact of the family planning programme have not been conducted. This study pooled data from nationally representative surveys conducted in 1996, 2001 and 2006. Multilevel logistic regression analysis of 23,381 married women of reproductive age nested within 764 clusters indicated that Muslims, Janjatis and Dalits were significantly less likely to use contraceptives compared to the Brahmins and Chhetries (OR=0.27, 0.88 and 0.82 respectively). Odds of using contraceptives by Newar were higher than those of Brahmins and Chhetries, though it was not significant. Exposure of women to family planning messages through health facilities, family planning workers, radio, and television increased the odds of using modern contraceptives. However, the impact of family planning information on contraceptive use varied with ethnicity. We also found that modern contraceptive use varied significantly across the clusters, and cluster-level indicators such as cluster-level mean age at marriage, mean household asset score, percentage of women with secondary education and percentage of women working away from home were important in explaining the variation of contraceptive use across clusters.

Determinants of Women's Autonomy in Decision Making

Dev Raj Acharya¹, Jacqueline S Bell², Padam Simkhada³, Edwin R van Teijlingen⁴ and Pramod Raj Regmi⁵

¹Aberystwyth University, School of Education & Lifelong Learning, Aberystwyth, UK;

²University of Aberdeen, Immpact, Institute of Applied Health Sciences, Aberdeen, UK;

³University of Sheffield, School of Health and Related Research, Sheffield, UK;

⁴Bournemouth University, School of Health and Social Care, Maternal & Perinatal Health Research, Bournemouth, UK; ⁵University of Aberdeen, Department of Public Health, Aberdeen, UK

Email address: ¹dra09@aber.ac.uk

How socio-demographic factors influence women's autonomy in decision making on health care including purchasing goods and visiting family and relatives are very poorly studied in Nepal. This study aims to explore the links between women's household position and their autonomy in decision making.

We used Nepal Demographic Health Survey (NDHS) 2006, which provided data on ever married women aged 15-49 years (n=8257). The data consists of women's four types of household decision making — own health care, making major household purchases, making purchase for daily household needs, and visits to her family or relatives. A number of socio-demographic variables were used in multivariable logistic regression to examine the relationship of these variables to all four types of decision making.

Women's autonomy in decision making is positively associated with their age, employment and number of living children. Women from rural areas and the Terai region have less autonomy in decision making in respect of all four types of outcome measures. There is a mixed variation in women's autonomy by development region across all outcome measures. Western women are more likely to make decisions about own health care (1.2-1.6), while they are less likely to purchase daily household needs (0.6-0.9). Women's increased education is positively associated with autonomy concerning own health care decision making (p<0.01); however, their higher education (SLC and above) shows non-significance with other outcome measures. Interestingly, rich women are less likely to have autonomy to make decisions about their own health care.

Women from rural areas and the Terai region need specific empowerment programmes to enable them to be more autonomous in household decision making. Women's autonomy by education, wealth quintile and development region needs a further social science investigation to observe the variations within each stratum. A more comprehensive strategy can enable women to access community resources, to challenge traditional norms and to access economic resources. This will lead women to be more autonomous in decision making in due course.

Gender, Kinship Patterns and Discrimination against Daughters

Reeve Vanneman¹, Sonalde Desai² and Biswarupa Ghosh

¹University of Maryland, USA; ²University of Maryland, USA;

³National Council of Applied Economic Research, New Delhi, India

Email address: reeve@umd.edu

Discrimination against daughters in India, resulting in lower survival probability for girls is well recognized (Das Gupta, 1987). However, what propels parents towards this grievous choice is less well understood. On a more optimistic note, recent studies suggest that public policies that encourage changes in perceptions of women, increase women's participation in the public sphere and reduce patriarchal control by encouraging non-farm employment may lead to reduction in discrimination against daughters (Chung and Das Gupta, 2007). Select studies in India also suggest that a normative change associated with introduction of television in a village may reduce sex bias (Jensen and Oster, 2007). This optimism appears to rest in a belief in a sequence of relationships that link television watching to greater gender empowerment and increased participation in the public sphere. Greater participation in the public sphere is linked to reduction in patriarchal controls and greater valuation of girls which then results in higher survival for daughters. However, anthropological research seems to paint a less optimistic picture in which increased modernity results in greater freedom from men without loosening the patriarchal controls on women (Derne, 2003; Liechty, 2003). Using data from a nationally representative survey of 41,554 households in India, titled India Human Development Survey (IHDS), this paper attempts to explore some of these relationships. The IHDS was conducted in 2004-2005 and includes a household interview as well as an interview with one ever-married woman aged 15-49 in the household. Using these data, we will address the following questions: (1) Is TV watching, particularly watching entertainment programmes, associated with greater empowerment for women and participation in the public sphere?; (2) Is women's participation in the public sphere associated with greater empowerment in the household domain and with lower discrimination against daughters? and (3) Is women's empowerment associated with lower discrimination against daughters? One issue needs to be considered while trying to address the above mentioned questions. Many of these relationships may operate at a contextual rather than individual level. Working mothers may do less to improve valuation of daughters than employment opportunities. Women's participation in the public sphere may help all girls, even though their own mothers may be secluded within the home. Hence, we analyze these relationships within a multi-level framework by estimating age-specific survival models within a hierarchical framework with children nested in families and families nested in communities. The IHDS provides a unique opportunity for addressing this topic. It contains detailed information on: (1) Household economy with information about sources of livelihood, non-farm employment, farm and business ownership; (2) Detailed information on gender ideologies and behaviors including the extent to which parents expect to rely on sons and daughters in their old age, women's household decision making, women's participation in public space, dowry prevalence and marriage and kinship patterns (exogamy vs. endogamy); (3) It also contains extensive information on exposure to mass media for men, women and children in each household.

Gender Issues and Transnational Networks among Patani Muslim Migrant Workers to Malaysia

Suttiporn Bunmak

Thaksin University, Faculty of Humanities and Social Sciences, Thailand

e-mail address: sb214@uow.edu.au

Gender is critical in shaping migration. Previous research has demonstrated that gender relations are influenced by and also influence migration (Morokvasic, 1984, Bjere'n, 1997, Honagneu-Sotelo and Cranford, 1999, Pessar, 1999, Oishi, 2002, Jolly and Reeves, 2005, Mahler and Pessar, 2006). There are important differences between males and females in patterns of migration and the impact of the labour market on social ties is indicated through gender relations. Incorporating gender into migration studies helps to clarify differences in the migration experiences of men and women, and the inequalities that are reflected and that emerge in migration processes. Drawing up examples based on six months — between 2008, November to 2009, April — of ethnographic fieldwork of Patani Muslim unauthorized migrant workers from the lower southern provinces of Thailand, employed at restaurants in Kuala Lumpur. This paper examines how gender relations influence and are influenced by migrant networks. It argues that within migration networks there are differences between men and women in terms of the position in the migrant networks, and their access to networks on the basis of sexual difference. The paper concludes by discussing the existence of separate men's networks and women's networks. This study found that men and women are likely to access the different forms of networks when they first migrate. Men are offered help for the first time through their multiple social ties, such as family members, relatives, friends, villagers and restaurant owners. In contrast, almost all women receive help from strong ties, contacts and close ties in Thailand such as relatives and family members who are former Patani Malay workers in Malaysia. Although women make their own decision to migrate, permission is needed from the women's parents first. Normally, parents allow them to migrate only with those with whom they have strong or close ties and in whom they have a high level of trust. Young women are more dependent on gender-based migrant networks than their male counterparts. Female migrant workers do not move within Malaysia as frequently as male workers despite their accessibility to labour market opportunities from their increasing networks in Malaysia. Migrant women differ from their male counterparts in that they do not use their networks to seek information about available jobs and contacts with restaurant owners no matter how many connections they have. Almost all female migrants have their established networks that they trust and workers they are familiar with in the new workplace. Women are thought to be at higher risk so need to establish close ties to protect themselves which takes some time. So moving within Malaysia is not easy for women.

Sons and Daughters: Effects of Children's Out-migration on Intergenerational Support in Rural China

Lu Song and Shuzhou Li

School of Social Science, **Soochow University, Taipei, Taiwan**

Email address: luluqd@gmail.com

In Chinese rural families, children's gender plays a crucial role in providing support to older parents. As the patriarchal family system has a profound influence on Chinese society, sons, rather than daughters, are expected to provide essential support for elderly parents in a traditional family. Therefore, a large gender division in family support for older parents in Chinese families should be expected. However, due to shifts in social and cultural contexts accompanied by out-migration of young adults, the traditional gendered intergenerational support pattern might be expected to change.

Although there are many studies on intergenerational support, few studies have addressed the relationship of adult children's out-migration and support of older parents from a gender-based perspective. The purpose of this study is to examine whether the migration of sons or daughters has a differential impact on the support provided to older parents who are left behind in rural areas.

Using data from the baseline and follow-up surveys of "Well-being of Elderly in Anhui Province, China" conducted in 2001 and in 2003, respectively, by the Institute for Population and Development Studies of Xian Jiaotong University, in conjunction with the University of Southern California, this paper employs the logistic model to examine gender differences in the effect of out-migration on division of intergenerational support in rural China.

The results show that the division of family support in rural China has not changed thoroughly under the out-migration of adult children; however, gender differences in intergenerational support between sons and daughters have reduced. While migrant daughters have greater probability of increasing financial support to their elderly parents, which narrows the gap between sons and daughters, migrant sons have less probability of increasing instrumental support to their elderly parents, which also narrows the gender difference of instrumental support. Further, as migrant daughters are more likely to increase emotional support to their parents, the gap between sons and daughters on intergenerational emotional support is further widened.

To sum up, although our analysis reveals that the traditional patrilineal pattern of old-age support is still dominant in rural society, out-migration of rural females helps to enhance the status of women in the family and society, and to weaken the gender difference in old-age support.

Poverty in India - A Study on its Gender and Age Sensitivity

Onkar Prosad Ghosh

National Sample Survey Office, India

Email address: onkar.ghosh@gmail.com

The methodology by which households and individuals are identified as poor is quite simple. If a household does not have sufficient resources to meet its material needs, it is considered as poor. While the measurement of a household's resources can be viewed largely as an objective statistical problem solved by the collection of appropriate survey data, the setting of a household's material needs or the poverty threshold is a highly subjective undertaking. Attempts to justify the choice of poverty thresholds in terms of scientific nutritional standards only thinly veil the political and social judgments being made. But judgments and choices must be made. To provide a focal point for the deliberations over the various judgments needed to set a poverty threshold, a single household type — the reference household — often a household of four composed of two adult parents and their two children, is chosen. Once a politically accepted poverty line for the reference household has been set, thresholds for households of different sizes and compositions need to be set. For example, if Rs. 2000 were set as the poverty threshold for a household of four, what would be the equivalent level of material consumption needed by a single individual? The ratio of the needed consumption for a household of any given size and composition relative to the poverty level of consumption for the reference household, is denoted as the equivalence scale. Similar questions may be raised for gender inequality of consumption. Concern for an appropriate set of equivalence scales would lessen if the choice of scales did not significantly affect our perception of who is poor. Yet, as many poverty analysts have found (Bhumann et al (1988), Triest (1998) and Betson (1996)), estimates of both the size and composition of the poverty population are significantly influenced by the choice of equivalence scales employed. In this paper, a set of equivalence scales has been determined and for each such set, poverty is measured. This gives a new look to the mechanism of poverty analysis in India.

Implications of the Marriage Squeeze for Old Age Poverty in China

Monica Das Gupta¹, Avraham Ebenstein² and Ethan Jennings-Sharygin³

¹World Bank, Washington DC, USA;

²Hebrew University of Jerusalem, Jerusalem, Israel;

³University of Pennsylvania, Population Studies Center, Philadelphia, USA

Email address: ¹mdasgupta@gmail.com

Fertility decline in China has fuelled a sharp increase in the proportion of missing girls observed since the One Child Policy. Increasing proportions of men will consequently fail to marry, and face old age without the economic and non-financial support normally provided by wives and children. Little is known about the potential socio-economic consequences of this impending imbalance in China's marriage markets. Using the successive Chinese censuses since 1982, we show that these unmarried men will be in greater need of safety nets: these men will be of low socio-economic status, and will be concentrated in poorer provinces that have fewer resources available for providing safety nets. We simulate the number and location of unmarried men in China in the 21st century, and the implied dependency ratios by province. We conclude with a discussion of the policy implications of the findings, and argue that China should consider initiatives for national funding for social insurance provided at the local level.

**Addressing Internal Migration induced Urban Vulnerability:
An Analysis of the Street Floating Population of Dhaka City**

Kamrul Hassan Sohag

RAJUK (Capital City Planning Authority of Bangladesh), Dhaka, Bangladesh

Email address: ksohag2001@yahoo.com

Dhaka is the administrative, commercial and cultural capital of Bangladesh, and serves as the nerve center of the country. It is going to be one of the ten mega cities in the world in terms of its urban population configuration. Growing at a very fast rate, Dhaka's urban population is predicted to increase from 11.3 million to about 21 million by 2015 (World Bank, 2007). Like all developing countries, the urban population of Bangladesh has grown much faster than the rural population. As population growth has typically sprawled across the capital city of Bangladesh, the city has been facing tremendous urbanization problems; internal migration being one of the major contributors to urban growth. In Bangladesh, internal migration, basically rural-urban migration, is the key concern for development. Internal migration to its major cities happens due to pull factors such as educational opportunities, access to jobs, better living conditions and wider opportunities for self-actualization. Rural people, especially vulnerable groups are pushed to the cities due to natural disasters such as river bank erosion, floods, cyclones and water logging as also economic difficulties and lack of employment opportunities in rural areas. The impact of rural-urban migration on urbanization can be visualized in terms of the increasing number of urban vulnerable groups especially the urban floating population.

This study is based on primary data collected from the floating urban population following systematic random sampling. Urban vulnerable groups are regarded as those people who face extreme poverty, have no shelter, and float on the streets within the city premises. The study reveals that about 47% of the sampled floating population had moved to the city as they had become homeless due to river bank erosion while the remaining were drawn by floods, water logging, lack of employment opportunities and other reasons. The paper presents the views of the respondents, based on quantitative findings. Capacity building is considered in this research as a broader concept of holistic thinking, analysis and recommendations. Thus, the findings of the study provide policy recommendations to promote a sustainable support mechanism for such vulnerable populations to minimize the effect of internal migration on urbanization. The study recommends revitalization of the role of rural and urban local government institutions to provide a support system including employment and income generating activities, to minimize the impact of internal migration on urban vulnerability and to promote sustainable urbanization in the Greater Dhaka city area.

Poverty in Democratizing Indonesia

Aris Ananta and Evi Nurvidya Arifin
Institute of Southeast Asian Studies, Singapore City, Singapore
Email address: arisananta@gmail.com

Economic policies are never made in the vacuum of social and political landscapes, particularly during the democratization of Indonesia since 1998. Prior to the democratizing era, the government played a very dominant role in poverty alleviation through developmental programmes. In contrast, civil societies have emerged taking increasingly more important roles in tackling poverty issues during the democratizing era. The governments have become more “populist” by creating an increasing number of social safety net programmes, including the “direct cash transfer” for those defined to be poor. At the same time, the people have a stronger voice to express their unhappiness toward government programmes, including those on poverty alleviation.

This paper focuses on the dynamics of the poor in such a situation. It starts with a discussion on the concept and measurement of poverty, which has often been the source of various interpretations, before it examines the trends of poverty in Indonesia. It then analyzes socio-economic characteristics of the poor, based on household data, where a household is defined to be poor if the average consumption of its members is below the national poverty line. The socio-economic variables include household size; household environment; and age, gender, education, and employment pattern of the head of household. It then evaluates some government policies, particularly the social safety net programme, a new feature during the democratizing of Indonesia. It also shows the political complications of providing a social safety net, including the issue of corruption.

Another feature of this paper is its examination of regional variations in the large Indonesian population. Decentralization has made regional governments in power to tackle issues on welfare.

The discussion uses statistics on poverty calculated by Badan Pusat Statistik (Indonesian Statistical Agency), which has been available for every year, for every province and district. It has three measurements of poverty (the poverty index, the index of the depth of poverty, and index of the severity of poverty).

One of the conclusions of the paper is that Indonesia has been doing relatively well in reducing consumption poverty. More efforts should be made to alleviate non-consumption poverty. Another conclusion is a suggestion to make a deeper study on the costs and benefits of conditional transfer programme currently implemented in many countries including Indonesia.

**Levels and Trends of Infant and Child Mortality in South and Southeast Asia:
A Programmatic Perspective**

Bornali Dutta¹ and F Ram

International Institute for Population Sciences (IIPS), Mumbai, India

Email address: ¹duttabornali@gmail.com

In the region of South and Southeast Asia, mortality decline is not uniform. There are ample studies on infant and child mortality considering one, two or more countries, but no study has been conducted so far focusing on the South and Southeast Asia region as a whole. There is also a need to study the trend of infant and child mortality in this region because there have been significant changes in infant and child mortality. This region is culturally driven, that is, culture plays a very important role in day-to-day life. In this region of South and Southeast Asia, gender differentiation is practiced. In spite of many programmes and policy interventions, infant and child mortality are still very high with some variations. Hence, there is an urgent need to study child mortality in this region. Furthermore, to understand infant and child mortality in the whole region of South and Southeast Asia, a comprehensive study is important. At the same time, analyzing the programme impact on infant and child mortality is imperative. The countries selected for this study are India, Pakistan, Bangladesh, Nepal, Cambodia, Philippines, Indonesia, and Vietnam.

The study aims to understand the levels and trends of infant and child mortality in South and Southeast Asian countries. At the same time, it also intends to see the changes in infant and child mortality in South and Southeast Asian countries with respect to different programmes that have been carried out in different countries. To understand the trend, secondary data from Inter-Agency Child Mortality Estimation, UNICEF, 2006, has been used for countries like India, Pakistan, Bangladesh, Nepal, Cambodia, the Philippines, Indonesia and Vietnam; the Sample Registration System (SRS) 1971-2006, has also been used for India.

The trend of infant and child mortality indicates a decline in infant and child mortality with varying pace in the different countries of South and Southeast Asia. The level of mortality is not equally distributed for different countries. In the four south Asian countries, the level is a little high compared to the Southeast Asian countries. Among the Southeast Asian countries, Cambodia has a high level of mortality. The reduction in infant and child mortality is followed by interventions by national and international agencies. WHO started the Expanded Programme on Immunization (EPI) and provided guidelines to be followed for conducting the programme. All countries followed this programme. Apart from that, each country also has its own programme. The decline in mortality since 1960 is the cumulative effect of all the programmes in each country. The immunization programme of Vietnam has been very successful and because of it, child mortality in Vietnam is the lowest among the eight countries studied.

Determinants of Chronic Malnutrition among Under-5 Children in Dhaka City

Md. Aminul Haque¹ and Aklima Jeshmin²

¹Institute of Public Health, Heidelberg University, Germany;

^{1,2}Department of Population Sciences, University of Dhaka, Bangladesh

Email address: ¹aminuldps@gmail.com

It is known that global warming due to climate change increases the temperature pattern of Dhaka city. Dhaka is one of the hottest cities in the world. A huge population, unplanned urban housing, frequent black-outs, least aeration, large number of vehicles, and use of air-conditioners have made the situation worse. Old people and children suffer from different health related problems. Moreover, during summer, lack of electricity, excessive sweating, sleeplessness and unwillingness to take food affect the health of children in Dhaka city

The objective of this study was to find out the different factors contributing to chronic malnutrition among children under 5 in urban areas.

A cross-sectional study was conducted in two wards in Dhaka City Corporation from December to May 2008 (six months). In the study area, 1124 households with under 5 children were listed. Every third household was taken as a sample, to constitute a sample size of 380 households. A semi structured interview schedule was used to collect information from the mothers of 380 under5 children. A weighing machine and meter scale were used to record weight and height, respectively.

Results showed that although the parents' educational level, mother's nutritional level and family income were quite high, the children were suffering from malnutrition and about 40% of the children were stunted. It is difficult to explain why children are malnourished and stunted when their parents' education, income and mother's knowledge about nutrition are high.. Perhaps environmental, psychological and biological factors need to be studied to explain complex phenomena like chronic malnutrition. We conclude from our findings that social and environmental factors should be included in calculating malnutrition or stunting because these factors have a great influence on malnutrition among young children in a city like Dhaka.

Infant and Child Mortality in Uttar Pradesh

Anshuman Paul

International Institute for Population Sciences (IIPS), Mumbai, India

Email address: anshumann.84@gmail.com

This research work entitled "Infant and Child Mortality in Uttar Pradesh", attempts to understand the determinants of infant and child mortality in Uttar Pradesh. Cox proportional-hazard model has been used to study the determinants of infant and child mortality, using data obtained from the National Family Health Survey (NFHS-3). Patterns and levels of mortality have also been studied using the SRS based life tables (from 1970s to 2006). Child mortality has been studied under two different age groups: infants 0-1 year and children aged 1-4 years. Both have a relatively distinct risk of dying and hence need to be studied separately. Seven different models have been constructed consisting of four groups of factors namely biological, socio-economical, behavioral and environmental. The conclusions of the study are as follows: (1) the mortality transition is well in progress over time (from the 1970s to the present time period of 2006) in Uttar Pradesh; however, there seem to be stagnation in the decline of mortality in the recent past; (2) among the under-5s, infants are more vulnerable to death compared to children in the 1-4 age group, and (3) as per the results of the present analysis, birth order, maternal education and place of delivery seem to be the crucial determinants of infant mortality in Uttar Pradesh. Sex of the child and migration status showed a significant effect on child mortality. The policy implications of the study are as follows: The study indicates that a new strategic framework for child health and development is required to lower under-5 mortality rates in Uttar Pradesh. The goals set earlier do not seem to be achieved due to the high child mortality rates still prevailing in Uttar Pradesh. So, the Government of India should reconsider the current mortality pattern prevailing in Uttar Pradesh, and adopt integrated approaches for child health programmes. Existing reproductive and child health programmes should be re-evaluated in the context of children and pregnant women, to check the accessibility of various facilities being provided. A better understanding of mortality patterns is required to handle the high mortality rates of Uttar Pradesh. Hence, to increase service utilization in districts, programmes should be decentralized. The challenges over the next ten years will be to address the unmet needs of the population and to fill up this gap with affordable, cost-effective and accessible interventions.

Intimate Partner Violence and Reproductive Wastage: The Case of Egypt

Marwan Khawaja², Ali Halawi², and Ziyad Mahfoud³

¹UN-ESCWA, Beirut, Lebanon;

²Concordia University, Department of Political Science, Montreal, Canada;

³Department of Public Health, Weill Cornell Medical College, Qatar

Email address: alihlawi@hotmail.com; marwan.khawaja@gmail.com

Intimate partner violence is considered a violation of basic human rights and a risk factor for several health outcomes. While a number of studies have investigated the impact of intimate partner violence on the health of both women and infants in many countries across the world, very few studies have focused on this issue in the Arab region. This study examined the association between having ever experienced physical intimate partner violence among Egyptian women and reproductive wastage.

The analysis was conducted using data from the Egyptian Demographic Health Survey 2005 (EDHS). The survey contained data on all household (HH) members from a multi-stage sample of 21,972 HH with a response rate of 98 percent, and 19,474 women of age 15-49 years with a response rate of 99 percent. Violence questions were asked to one eligible woman in a sub-sample of one-third of the households selected for anemia testing. The analysis for this study included only ever pregnant married women in that sample (5,161 women).

Analysis was conducted using logistic regression. The main outcome variable was whether the women had ever experienced miscarriage, spontaneous abortion or still birth. Independent variables included age of respondent, educational level, residence, ever use of intrauterine device (IUD), and consanguinity. Results indicated that after adjusting for these variables, ever experience of physical intimate partner violence was significantly associated with ever experiencing reproductive wastage among ever pregnant married women in Egypt (OR=1.19, C.I.=1.01 , 1.40).

This study showed that IPV was significantly associated with reproductive wastage among ever pregnant Egyptian women. IPV remains a public health and human rights concern affecting a considerable number of ever married Egyptian women who have ever experienced such abuse.