

# अन्तर्राष्ट्रीय जनसंख्या विज्ञान संस्थान (विश्वविद्यालय समतुल्य)\*

स्वास्थ्य एवं परिवार कल्याण मंत्रालय, भारत सरकार का स्वायत्त संगठन  
मोवंडी स्टेशन रोड, देवनार, मुंबई - 400 088. भारत



# International Institute for Population Sciences (Deemed University)\*

An Autonomous Organisation of Ministry of Health & Family Welfare, Govt. of India  
Govandi Station Road, Deonar, Mumbai - 400 088. INDIA

No. Aca/Ph.D./ 624 /10  
August 20, 2010

Dear Dr.

Please find enclosed herewith abstracts which shall be put on the Institute's website and also to be published in the Institute's Newsletter, under the heading 'The Theses of the Year'.

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\* Not Available

Yours sincerely,



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Asstt. Registrar  
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1. **Prof. M. Guruswamy**  
In-charge, Computer Centre
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Coordinators, Publication Cell

**Knowledge, Attitude and Risk: A Study of Male Clients of Female Sex Workers  
in the Wake of HIV/AIDS Epidemic in Mumbai**

SUDIPTA MONDAL

**Abstract**

Over the years there has been a growing concern about the escalating pace of the HIV/AIDS epidemic in Mumbai and about the ways and means to prevent the fuelling forces, which are complex in nature. As a result, ongoing efforts to check the pace of the epidemic through a variety of targeted interventions need to be reorganized and major components in the domain of interventions should be prioritized. Most HIV prevention interventions focus mainly on sex work encounter/solicitation sites. However, clients of sex workers, who are an important bridge between high risk and low risk population remain beyond the purview of such organized programmatic responses. In this present study an attempt has been made to understand male clients' knowledge about HIV/AIDS, their preference for various sexual venues, their attitude towards sex work and their sexual behaviour and risk perception in the light of the changing pace of the HIV/AIDS epidemic in Mumbai. This study is based on primary data, collected from the male clients available in different sex access points (place of solicitation and not necessarily place of encounter) in Mumbai during December 2006 to January 2007. The primary survey encompasses both qualitative as well as quantitative techniques of data collection. Time Location Cluster Sampling (TLCS) was used to recruit clients from various sex access points across Mumbai. From three red-light areas namely, Kamathipura, Ghatkopar and Turbhe Store, a total of 104 clients were interviewed and from 128 bars, a total of 196 clients were recruited. The study notes that sex work scenario in Mumbai seems to be changing. It seems that sex work is drifting away from traditional brothel-based settings to non-brothel based alternative venues. This change is primarily guided by the dwindling demand for brothel based sex, mainly on account of the changing risk perception of clients. Majority of the clients find the chances of acquiring HIV to be higher in brothels than in non-brothel settings. It can be further seen as a coping strategy on the part of the clients in view of the HIV/AIDS epidemic. A higher proportion of the study clients are not only married but also living with their spouses. Interestingly, most of these clients maintain their relationship with unpaid partners thereby increasing the risk of spreading the infection to a larger spectrum. Social network among these study clients

has emerged as a significant factor contributing to their deviant behaviour not only in terms of substance abuse but also in terms of their risky sexual behaviour. However, a considerably high proportion of clients visiting sex workers under the influence of alcohol add to the complexity of HIV prevention intervention programs in Mumbai. Mumbai offers a variety of sexual outlets for different segments of clients based on their choice and affordability. A good number of study clients are also aware of these newer modes of solicitation and alternative sex access places, albeit the use of these services by the study clients is limited. Perhaps intervention programs should try to use tailor-made packages for different segments of clients. The study finds that the average age of sexual debut for these study clients is 18.9 years when they first had their sexual intercourse with a female partner. Brothel-based clients have significant lower age of sexual debut. Lower condom use with their un-paid sexual partners including wife than with paid sexual partners increases their vulnerability to STI/HIV infection and presents a challenge for the condom promotion program. The study reveals that a significant proportion of the clients have learnt the use of condoms from sex workers. The clients have also talked about sex workers' insistence on condom use. Only one-fifth of the study clients have reportedly ever experienced STI-related problems in the last one year, majority of them reported to have experienced contact problems - a syndrome of problems relating to 'garmi' primarily arising due to unsafe sexual practices, especially with multiple partners. There is a tendency for self-medication or for visiting quacks or traditional practitioners. Though the intricacy of HIV infection has been better understood in recent years, the study findings of a sympathetic attitude towards sex workers and a negative attitude towards HIV positive people presents a complex scenario to implement the second generation of HIV prevention programs with the desired effect.

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**Levels and Determinants of Infant Mortality in Madhya Pradesh**  
*Ph.D. Thesis*

*Nikhilesh Parchure*  
*Research Scholar*

*Dr. H. Lhungdim*  
*Guide*

**Abstract:**

Infant mortality is a sensitive index, not only of the health status of a country but also of social and economic development. This vulnerable age is exposed to several exogenous and endogenous factors, which influence the health, growth and development of the child. Each year, 10.7 million children die before age of five years worldwide and more than 2.1 million of these deaths take place in India. Every year some 1.5 million infants die in India which is one quarter of all the infant deaths all over the world. More than two-thirds of all the infant deaths occur in Empowered Action Group (EAG) states of India. In the present thesis, levels and determinates of infant mortality has been studied from Madhya Pradesh state. Madhya Pradesh is one of the high focus states under NRHM and because of the high infant mortality levels and poor socio-economic conditions and slow pace of demographic transition. The present study is based on Census, SRS and NFHS-2 (1998-99) and NFHS-3 (2005-06) data. Infant mortality in Madhya Pradesh has been analyzed at three levels: State, Region and District level and determinants are also analyzed at three levels: Individual child level, Maternal and household level and Community level. univariate, bi-variate, multivariate analyses and descriptive statistics have been used. Among the multivariate techniques of analysis, Logistic regression and Cox proportional hazard model have been used. To estimate IMR at district level from Census 2001 data, Brass methods have been used. The thesis is organized in seven chapters. The study found that decline in infant mortality is not uniform in the three decades (1971-2001). Sex differentials in IMR shows that one-third of the districts still have higher female infant mortality. Rural IMR declined by 39 percent while urban IMR declined by 43 percent in this period. Decline in IMR in rural areas is faster during 1981-91 compared to decline in urban IMR. The analyses found that an increase in preceding birth interval and timely antenatal care during pregnancy can reduce chances of infant deaths. It is observed that maternal education, her health during pregnancy have bearing on her experience of child loss during infancy. Household environment, social settings and family structure are crucial in explaining higher infant mortality in Madhya Pradesh. It is observed that during 2005-06, survival chances of female child have improved considerably. Presence of certain maternal factors such as age at the time of delivery, working status and decision making in household improves the chances of survival during infancy and effects of individual child level characteristics on survival during infancy. The infant mortality in Madhya Pradesh is declining; rural areas are showing faster decline compared to the urban area. This suggests that health intervention is needed in urban areas where health infrastructure is overburdened. Male-female disparity in infant mortality rate is decreased during the three decades. The individual level factors such as sex of child, preceding birth interval, birth order have changed the direction of effects when maternal factors are in force. Home deliveries are also becoming safer in the presence of certain maternal characteristics. Household level characteristics have less influence on effects of infant mortality. Household hygiene and socio-cultural settings have less effects in improving survival chances. There has to be more focused programmes to generate awareness about household hygiene.

## **Annexure II: Thesis Abstract**

**Title: HIV/AIDS related risk behavior and sexual health problems among diamond workers of Surat, India**

**SOURABH CHAKRABORTY**

The worldwide fight against HIV has been most effective in countries that have confronted the epidemic as a challenge to society as a whole, rather than treating it as problems of small-marginalized populations. This study attempted to explore the link between Diamond workers and HIV/AIDS and also the HIV vulnerabilities associated with societal issues such as working and living conditions of the workers, social networking among them and risky indulgence in the new environment.

**Objectives: the specific objectives of the study are;**

1. To understand the role of social networking in contributing to risk behaviour among diamond workers
2. To assess the level of awareness about STDs, HIV/AIDS and their mode of transmission and prevention among diamond workers
3. To examine the pattern of risk behaviour among diamond workers with respect to HIV/AIDS
4. To understand the sexual health problems and treatment seeking behaviour among diamond workers

**Hypothesis:** As the study is explorative in nature, hypothesis are not framed.

**Study area:** The data has been collected from diamond industry, Surat.

**Sample:** a total of 407 Diamond workers were successfully interviewed for the study.

**Instruments/tools used:** Both qualitative and quantitative tools were used for data collection. In qualitative tools, in-depth interview guidelines for individual respondents

and key informants have been canvassed. A semi-structured questionnaire has been developed and used for collecting quantitative data.

**Techniques:** For the analysis of data collected through qualitative methods, purpose, the text in the interviews was coded with well defined codes and the quotations were analyzed using Atlas-ti. Quantitative data was analyzed with the help of SPSS package.

### **Major findings**

The study found that, most of the respondents were young and belong to Hindu religion. The income level for the majority of workers was low and they are earning between Rs. 3000-5000. Most of them were married (81 percent) but living alone without their spouses. It was found that the workers have good and strong peer groups and have congenial relation with the neighbors and friends and visit each other regularly. In the migrant category more than half of the workers feel lonely. The respondents who are illiterate and belonging the lower age groups (up to 24 years) are more involved in the sexual activities. Similarly, never married respondents and those who are living alone are visiting the CSWs and other women/girls more frequently than those who are living with the family and relatives. The findings show that those who are earning less (below Rs. 2000/) are more engaged in this type of activity (visit to CSW). It was reported in the study that the problems related to sexual health was more among the married respondents, and those who are migrant and visit CSWs. The treatment seeking behaviour was found poor as for most of the respondents; the source of treatment was medical shop, NGO clinic, traditional practitioners and quacks.

Sample

137 Diamond workers

Lower income group

In

tools used: Both

Qualitative and

quantitative tools

Guidelines for

*Title of the Ph. D. Thesis*

**Risk Exposure, Treatment Seeking Behavior and Quality of Life:  
A Study among Hospital Based Hepatitis Patients in Mumbai**

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**Abstract**

Viral Hepatitis is a major public health concern, a source of significant morbidity and mortality in the world that exacts a substantial cost on society. It is the most common cause of chronic liver disease, Cirrhosis and Hepatocellular Carcinoma (HCC). It grows as a liver cancer, which is the 4th commonest cancer death in the world. The developing countries like India the problem felt severely. The growing urbanization, migration, economic factors including poverty forcing a huge population into the cities like Mumbai, where their living condition, environment, behavior, hygienic, risk exposures making them vulnerable to the disease such Hepatitis which affect their health and quality of life. *The objective of the present study is to study the pattern and trends of reported Hepatitis cases and deaths in Mumbai; To study the socio economic profile of the respondents, treatment seeking process and their perceived risk exposures; and To examine the Health related quality of life of Hepatitis patients.* To fulfill the objectives, the study design has been made into three parts. Part one is a detailed descriptive analysis from secondary data. Part two dealt with primary data with quantitative data collection with a structured survey has been done. The sample size considered is 256 confirmed hepatitis patients from three groups namely Viral Hepatitis in-patients (102), Hepatitis B positive in-patients (68), and Viral Hepatitis OPD patients (86). Of OPD patients retained for the study were screened from 550 suspected outpatients. For the primary data collection a structured data collection tool has been used. There are bivariate analysis, independent sample T test, Multivariate logistic regression and factor analysis were carried out. The qualitative tools such as Focus Group Discussion, In-depth Interview were administered. The secondary data obtained from public health hospital records, published statistics from Municipal Corporation of Greater Mumbai. The primary data has been collected from the specialized Center for Infectious Diseases of Mumbai, a surveillance center for Jaundice/Hepatitis diseases where patients coming directly as well as referred from all over the medical institutions. The results reveals from historical data, year post 2000 the reported/registered cases of hepatitis have increased as compared to previous years. During the year 1990-2007, the average fatality rate is 50 per 1000 cases, i.e 5 percent of reported Hepatitis (i.e 5 percent) cases were died among hospitalized. The registered death reported was high (257 deaths) in the year 1991, where as in the year 2003, it was only 51 deaths were reported. One can

observe that in the recent years, the numbers of registered cases have increased mainly due to the improvement of surveillance system. However the reason for the decrease in reported cases of death is due to improvement of prevention and curative health programmes implemented after 2003. It was observed that the peak of epidemic lies between the months from June to September of each year. The ratio was calculated between Hepatitis and Other diseases reported. The ratio value was found to be 0.52. It means half of the patients coming to the hospital were found to have hepatitis diseases. Logistic regression analysis and factor analysis have been used for the analysis of hygienic and sanitation related risk exposure with background variables. In total five models have been used in the analysis. Age, migration, occupation and residential status are found to be highly significant. The lower the age, the less is the likelihood to suffer from longer duration of the diseases as compared to the upper age group. The migrants were found to be 3.6 times more likely to suffer from the long duration of disease than the non-migrants. The male respondents were 4.6 times more likely to suffer from the longer duration of the disease than the females. Those who were staying with family were less likely to suffer from the longer duration of the disease. The unskilled labors are found to be more likely to suffer as compared to the other service categories. Those having lower risk of hygiene and sanitation related exposure are also less likely to suffer from longer duration of the disease. In other words, those respondents who have high risk exposure due to lack of hygiene and sanitation also are found to be more likely to suffer from longer duration of the disease. Factor analysis results shows that there are four factors which constitute four key dimensions of quality of life of patients. The first factor constitutes of work, productivity, reduction in number of working days, role limitations and vitality. It explains 16.85% variation in quality of life amongst Hepatitis patients. The second factor constitutes of body pain, problems related to socialization and worry of disease/carrier/virus transfer to the next generation. It explains 15.34% variation in quality of life amongst Hepatitis patients. The third factor constitutes of emotional function and mental health problems. It explains 13.29% variation in quality of life amongst Hepatitis patients. The fourth factor constitutes of fitness and fear. It explains 12.82% variation in quality of life amongst Hepatitis patients. The findings emerged from qualitative research method FGDs that the nomenclatures of Jaundice disease spelled out by many respondents were *Pliilia, Jaundice, Kavil, Gaman, White kavil, Pasali Kanj, and Safeth Pilia*. as many of the member belonging to medium and lower socio economic society, especially the males feel that they loose their income because of which they struggle to feed their members. The female participants especially mother worry about their children's and aged dependent who suffer not attended their needs during their absents or physical inability in the house. The young participants opined that they do not care much about the disease as they considered this as the other common diseases where as, the adults or aged who are involved in feeding their families feel, loss of physical strength. In term, all these constrains make patients psychologically stressed in course of time. Though Hepatitis disease is also transmitted through multiple sexual relationships there is no undesired social stigma attached to this disease as to the vulnerable diseases like HIV/STD and AIDS. It is also observed from many of the respondents responses that they are unable to distinguish the types of disease associated with Jaundice and their serious impact, its is very sad to observe some misconceptions prevailing among the participants that first, hepatitis B positive patients believe that the disease spreads only due to the contaminated water and untimely food intake; this disease is cured by visiting local quakes and religious sources; third, these disease is also cured by applying herbal in the eyes.

**EXPLORING PUBLIC-PRIVATE PARTNERSHIP PARADIGM  
THROUGH A LONGITUDINAL STUDY OF REPRODUCTIVE HEALTH  
CARE SERVICE UTILIZATION IN INDIA**

**Sandip Anand**

**THESIS SUBMITTED FOR THE DEGREE OF  
DOCTOR OF PHILOSOPHY  
IN  
POPULATION STUDIES**



**International Institute for Population Sciences  
Deonar, Mumbai-400 088**

**2008**

ABSTRACT

SANDIP ANAND

**Research objectives:** The study aimed to find out contextual and quality of care differentials and determinants with respect to utilization of public-private health facilities for reproductive health care purpose through longitudinal assessment in four states of India, and to explore the meta organizational issues related to public-private partnerships through a study of key stake holders. **Hypothesis:** The higher the level of health workers' visits to women or the level of women autonomy within a state, the higher will be the utilization for reproductive health services. The higher the level of women autonomy within a state, the higher will be utilization of 'both public and private' health facilities. The higher the perceived level of staff's treatment of client or effectiveness of treatment, or availability of medicines with private health facilities, the higher will be the utilization of private health facilities than public health facilities. **Methodology:** There were two broad components of the study. The first component was secondary in nature. It included analysis of data collected by International Institute for Population Sciences (IIPS) and The Johns Hopkins University (JHU) as a follow up study to the 1998-1999 National Family Health Survey (NFHS-2). The second component of this research was primary and qualitative in nature. **Sample:** For secondary data analysis, it consisted of 3666 women from unified Bihar (2843 from Bihar, 823 from Jharkhand), 1117 from Maharashtra and 1520 for Tamil Nadu. For qualitative component, sample consisted of key stakeholders in Government, funding agencies and their partners in Bihar and Jharkhand. **Statistical techniques/designs:** The main statistical techniques used were cross tabulation, composite indices construction, logistic regression analysis, cluster analysis, discriminant analysis, Jaccard analysis, and swot analysis. Qualitative data was analyzed with the help of content and semiotic analysis. **Instruments/tools used:** IIPS-JHU study questionnaire and Interview guide. **Inference and Findings:** In this study, on the basis of empirical findings a schema for PPPs (public-private partnerships) has been theorized. The schema is based upon the key constructs which have emerged as critical issues in the study. These constructs are core competence, quality of care ethos, need for dignified treatment, governance in Meta organizational structure, and cognitive justice in reproductive health care. The findings give genesis to the theory of cognitive intermediation to explain the core competence of emerging meta organization of PPPs. According to this theory of cognitive intermediation, success of health care organizations in primary health care seems to be dependent upon their ability to create an environment for the clients where irrespective of the socio-economic inequality, equity at the level of cognition can be delivered in terms of quality of care.

**Schooling of children:  
A Micro - level Analysis of  
Tribal District Jhabua in Madhya Pradesh**

**THESIS**

Submitted by

**Shilpi Mishra**

*Thesis submitted for the Award of*

*Doctor of Philosophy*

*In*

*Population Studies*



**International Institute for Population Sciences  
(Deemed University)**

**Deonar, Mumbai, India**

**March 2007**

## Ph. D. Abstract

Realizing the education as pre-requisite for progress and development, and "DETERMINANT" of most of the demographic behaviour, it has been given highest priorities in India by assuring free and compulsory education to all children up to age of 14 years within ten years from the time of formation of its constitution, but this goal is yet not achieved and efforts are far from satisfactory. In this context present study is an attempt firstly, to study the differentials among children under never been to school, currently going to school and dropped out of school categories. Secondly, to study the factors associated with different schooling statuses. Thirdly, to study the awareness and perception of fathers regarding education of their children, awareness of parents' and community leaders regarding educational benefits given by the government. Lastly, to assess the linkages between individual/family, community, teacher and community leader for strengthening education and understanding the issues at each levels. In the present study it is hypothesized that boys are more likely to be in school as compared to girls; economic condition of family and schooling status of children are positively associated; there exists a positive relationship between birth order of the child and schooling status; and there exists an inverse relationship between out-migration of father/ family and schooling status of children.

For the present research primary data were collected from tribal district Jhabua of Madhya Pradesh during 2002. Total 34 villages were covered from 10 blocks of the district. Data from 327 fathers who had at least one child in the age group 6-14 years were collected, covering 748 children through both quantitative and qualitative techniques.

It is found that migration of fathers/ family did affect the schooling of children in terms of non-attendance, irregularity and lackadaisical attitude of children in schooling. Emphasis on boys' education is more than educating girls as parents/ community do not perceive much benefit in educating girls. Significant differential was found in terms of girls never been to school as compared to boys. It emerged out very strongly that children actually do not get favourable environment for the studies at home mainly due to the illiteracy of parents for which greater emphasis on *Ashram* schools was made by the parents. Economic condition of the family, father's education, sex of the child, out migration of father and discussion regarding sending child to school came out as significant predictors of schooling status of the children. Study revealed that, though schools are available, non-functionality of schools still remained a matter of concern in majority of the studied villages. Culturally irrelevant textbooks and materials, curriculum and pedagogy and teaching- learning process in tribal areas further restrict children from being into school. Teachers and community leaders play very limited role in motivating parents for sending their children to school. Engagement in non-teaching tasks, inability of students to understand the book language, curriculum irrelevant to the culture/ society, difficulty in commuting to remote villages, amalgam of classes in a single room are the main problems faced by the teachers in gratifying their duties. Irregularity of teacher reduces interest of children in schooling. There is very limited interaction between, parents/ community, community leaders and teachers for strengthening the schooling of children in the study villages. Most of the people in the study are not awareness about Village Education Committee (VEC) and Parents Teacher Association (PTA). Most of the children are engaged in various household or other activities strongly affecting their schooling status, which calls for greater attention of policy makers. In the supply side, functioning of schools and giving quality education still remains a challenge. There is a need to mitigate the difference in the claims made by the govt. under different provisions and schemes and reality of schooling of children.

# Assessing Health Inequalities among Indian Children: A Decomposition Analysis

Jalandhar Pradhan

*Thesis submitted in partial fulfillment of the requirements for the  
award of the degree of Doctor of Philosophy  
in  
Population Studies*



International Institute for Population Sciences  
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2009

## Ph. D Thesis Abstract

**Introduction:** The distributive dimension of health or health inequality has become prominent on global health policy agenda, as researchers have come to regard average health status as an inadequate summary of country's health performance. Moreover, assessing health inequalities within class is an important research agenda; more importantly, comparative analyses of their determinants. Based on previous review it was well established that poor are more deprived in health but health inequality within poor is also significant. So, assessment of health inequalities within poor and other deprived (SC/ST, rural, illiterate etc.) groups are essential for effective policy intervention.

**Objectives:** The objectives of this research are: First, to study health inequalities in terms of child survival (under2 mortality) using new WHO health inequality index and to compare the estimates of new inequality indices with conventional inequality estimates using relative and absolute measures. Second, to assess between and within group inequalities in terms of child survival, nutrition, immunisation and curative care. Third, to assess the socioeconomic inequalities in child health in terms of child survival, nutrition and immunisation and decomposition of these inequalities to their interrelated covariates. Fourth, to assess equity and efficiency dimensions of health inequalities with respect to child survival, nutrition and immunization. Fifth, to interrelate levels of summary indicators of health and socioeconomic development with the levels of health inequalities across the states of India.

**Data:** For most part of the analysis, data have been used from National Family Health Survey-3, 2005-06 (NFHS-3, 2005-2006). In addition data from Central Statistical Organisation (CSO) and National Sample Survey 61<sup>st</sup> round on consumer expenditure, 2004-05 are used.

**Methodology:** A range of statistical, econometrics and multivariate methods have been used to study the various dimension of health inequalities. Inter-individual differences in child mortality (under 2) is estimated using WHO inequality index. Logistic regression model is employed to estimate adjusted percentage of a child health indicator to capture between and within group inequalities on child health indicators. Concentration indices are calculated to assess socioeconomic inequalities in child health indicators and the methods proposed by Wagstaff et al., 2003 is used to decompose these inequalities to their socioeconomic covariates. To address equity and efficiency dimension of child health indicators the measures of achievement are used. Lastly, regression model is estimated to study interrelationship between the level of health inequalities and key socioeconomic indicators at the state level.

**Findings:** This research demonstrates that the different measures of health inequalities employed in the analysis have been useful to disaggregate the nature and magnitude of between, within group and total health inequalities among Indian children. The new WHO inequality index ranked Kerala with least inequality and Madhya Pradesh with highest level of health inequalities in term of under2 child mortality. At the same time socioeconomic inequalities measured in terms of concentration index ranked Kerala with higher level of wealth based inequality than Madhya Pradesh. In the second stage analysis, total health inequalities were disaggregated by incorporating between and within group inequalities. Though the average health status is better in south and west region, the within group inequalities are significant. Decomposition results highlights that poor economic status is a foremost factor in determining the level of health inequalities, but in some states like Himachal Pradesh, Punjab, Haryana, and Delhi the contribution of mother's education is substantial and significant. State-wise adjusted under2 child mortality scores reveal an increasing trend with increasing values of inequality aversion. Even in health transition advanced states of Kerala and Goa where the under2 mortality rates were below 30, the level of adjusted child mortality scores increase significantly with the increasing value of aversion. Lastly, regression analysis suggests that average income is positively related with socioeconomic health inequalities (measured in term of concentration indices) for under2 mortality, child not fully immunized and prevalence of stunting.

# LINKAGES BETWEEN POPULATION, LAND USE AND ENVIRONMENT: A CASE STUDY OF BHUBANESWAR CITY

By

**Nihar Ranjan Rout**

*Thesis submitted for the award of  
Doctor of Philosophy  
in  
Population Studies*



**International Institute for Population Sciences  
Mumbai, India.**

**2008**

## Abstract

The current study is an attempt to analyse the process of city growth and its associated changes in the land-use pattern and environmental set up with an aim at providing inputs for formulating city environment plan of Bhubaneswar. The specific objectives of the study included analysing the population growth and its structure, proliferation of slums and flow of migrants, changing pattern of land-use and the resulting changes in the physical environment in terms of air, water, and solid waste pollution, as well as temperature and rainfall change.

The study was based on analysis of both primary and secondary data collected from different sources. While data on population change and infrastructure were mostly obtained from Census of India and Municipal Statistical Yearbooks, environmental quality data were collected from Orissa State Pollution Control Board records and climate data were obtained from Indian Meteorological recordings. In this study, land use analysis was based on both existing classifications for earlier dates, as well as satellite imagery retrieved for 2007. Two separate primary surveys were also carried out to gather information about slum population and perception of urbanites about the urban environment. To fulfil the objectives, apart from using different statistical techniques like coefficient of correlation, Urban Rural Growth Rate and Ratio method, Cross-tabulation, Mann-Whitney U test, Krigging method of interpolation, a number of indices like Composite Environment Quality Index, Private Hospital Quality Index, Civic Amenity Service Index were also computed. Besides, different maps and graphs were also plotted to facilitate the analysis.

Bhubaneswar has been one of the fastest growing cities in India, whose population growth was found to be the outcome of heavy in flow of migrants as a result of increasing number of educational institutions and other organizations, better employment opportunity and better health facility, there in. Though there was a continuous increase in the infrastructure and various services available in Bhubaneswar, it could never match the rate of population growth. The massive in flow of poor migrants led to an enormous increase in number of slum and slum population over the years.

Land use analysis of the city pointed out that there was a heavy growth of residential land in recent time. However, the most serious issue alongside increasing concrete structure was found to be reduction in land under forest cover or plantation. In fact, it was clearly observed that the area under natural vegetation was reduced drastically around the city during last few decades. This fast growing city experienced mushrooming growth of residential buildings in and near the low-lying flood plains of Daya and Kuakhai, which increased the risk of waterlogging and city flooding by many folds.

Bhubaneswar experienced the air pollution mostly as a result of increasing population, reduced level of green cover and increasing number of motor vehicles. As regard to the quality of water, river Kuakhai, the major source of drinking water for the city, was found to be getting more and more polluted over the years. Though the total volume of solid waste generated in the city appeared to be under control, status of Bhubaneswar with respect to per-capita waste generation and waste collection were in a highly problematic state. Regarding climatic parameters, while rainfall became more unevenly distributed over the years, temperature rise got highly accelerated in the recent time.

The primary survey revealed that the city dwellers perceived 'air pollution', 'solid waste pollution', 'mosquito prevalence', 'absence of proper drainage system' and 'parking problem' as major problems related to urban environment in Bhubaneswar. Respondents were also not much satisfied with government health centres. Migrants and old age respondents were less satisfied with the urban environment and infrastructure. However, it was clearly observed that there was a wide disparity in service provision between slum and non-slum households.

In fact, the study asked for a number of issues to be considered, like adopting conglomeration approach of urban planning; improving the infrastructural facilities, especially for the slum dwellers; taking steps for improving parking facility; enhancing mass transport system; checking slum growth and encroachment; creating green belts; checking mass conversion of agricultural land in to residential and commercial land; checking construction in and near the low-lying flood plains in order to avoid obstructions in the natural drainage system; controlling the establishment and functioning of stone crushers and brick kilns; and establishing a well-developed sewerage system, which would be helpful for proper planning and maintenance of the city.

**PROXIMATE DETERMINANTS AND FERTILITY  
PREFERENCES AMONG CHRONIC POOR, POOR AND  
NON-POOR: A CASE STUDY OF BALASORE DISTRICT  
OF RURAL ORISSA**

By

**BIJAYA KUMAR MALIK**

**THESIS SUBMITTED FOR THE AWARD OF**

**DOCTOR OF PHILOSOPHY  
IN  
POPULATION STUDIES**



**INTERNATIONAL INSTITUTE FOR POPULATION  
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## ABSTRACT

The research has two goals, namely, the methodological goal of developing measurement of chronic poor, poor and non poor using cross sectional data and its application to see whether the demographic behavior differs in a demographically paradoxical state of India. The estimates of poor are derived using a set of 12 variables that broadly captures the multidimensional nature of poverty, ranging from basic capability, food security, occupation, education of children, wealth and basic amenities. The estimate of poor showed greater internal coherence, are reliable and predicts many key parameters well. Estimates of chronic poor are derived by combining the objective estimates of poor with the subjective measure. The demographic differentials of chronic poor, poor and non-poor are examined. Results indicate that there has been continuous increase in mean age at marriage among chronic poor and poor. The differences in mean age at marriage are small among chronic poor, poor and non-poor. There is no uniform pattern on coital frequency among chronic poor, poor and non-poor but the mean duration of breast feeding and post partum amenorrhea is highest among chronic poor. Mean children ever born and mean children survival is highest among chronic poor followed by poor and non poor but mean child death among chronic poor is more than 3 times than that of non poor. There is no significant difference in ideal number of children among chronic poor, poor and non poor. Son preference is cutting across poverty line, i.e., equally high among chronic poor, poor and non-poor. Correct specific knowledge of spacing methods is lower among poor and chronic poor compared to non-poor. However knowledge of limiting method is equally high among chronic poor, poor and non-poor. The use of any method is 58 % among non-poor, 52% among poor and 48% among chronic poor. But the use of female sterilization is maximum among chronic poor followed by poor and non-poor while the use of spacing method is lowest among chronic poor followed by poor. Differentials in contraceptive use among poor and non-poor narrowed down with 2 or more living children. However, unmet need is higher among non poor compared to chronic poor.

### **Implications:**

Based on the findings, the implications of the study are i) to add questions on daily purchase of staple food, and question on perception on inter-generational economic status of household in small and large scale population based surveys, ii) specific efforts to reduce child death among chronic poor and iii) promoting spacing method use among chronic poor and poor.

**AN INDIRECT STUDY OF SURVIVAL FROM A DISEASE  
IN THE CONTEXT OF DEVELOPING COUNTRIES**

by

➔ **Murali Dhar\***

**Thesis submitted for the award of**

**Doctor of Philosophy  
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## ABSTRACT

Knowledge of survival is essential in the community level management of a disease. Broadly, there are two approaches of population-based study of survival from a disease, the direct (i.e., classical) approach and the indirect approach. With classical approaches, survival studies deal with evaluating overall performance of a group of patients in terms of quality and quantity of life after diagnosis/treatment. There are numerous difficulties in the conduct of a population-based survival study in the context of developing countries, including India. While planning a population based survival study, one has to consider the possibility of a substantial amount of financial and other resources including the time required. Subsequently, loss to follow-up is a typical problem encountered in survival studies, causing biased estimates. In view of these difficulties with the classical approach, the overall aim of the present study was to propose an indirect methodology for the study of survival. Specific objectives were to a) suggest an indirect methodology for the study of survival, b) demonstrate empirical application of the methodology and c) validate the proposed methodology. Proposed methodology is based on life table techniques and uses current data on incidence and mortality from the disease. It involves the estimation of expected years free of disease (EYFD), expected years with disease (EYWD), expected years of life lost (EYLL) and average duration of disease (ADD) and their comparison over a time period. Empirical application was carried out for mouth and lung cancers in males and cancers of breast and cervix in females as well as for all sites combined together in each sex. Cancer incidence and mortality data by age and sex for the years 1989, 1993, 1997 and 2001 were obtained from published reports of Mumbai Cancer Registry, India. All causes of deaths for these years were obtained from Mumbai Municipal Corporation. Three life tables were constructed by applying various attrition factors: (a) risk of death from all causes; (b) risk of incidence and that of death from other causes; and (c) risk of death from other causes only. The expectation of life from the second life table gave EYFD. EYWD and EYLL were calculated by suitable subtractions among three expectations of life. ADD was calculated by dividing person years lived with disease by number developing the disease. In order to arrive at total number developing the disease, a break-up of those arriving to the last open-end age interval in second life table was required. The break-up was required into those developing and those not developing the disease before dying. This was obtained by employing an iteration procedure. It was noted that during 1993-2001, EYFD for all sites increased from 59.4 to 62.1 and from 63.8 to 66 years in males and females respectively. EYLL was about 0.8 year in males and 1 year in females. Similarly, EYWD was 0.6 and 1 year in males and females respectively. ADD for all sites varied from 4 to 4.7 years in both sexes. It was about 6 years for mouth cancers and 2 years for lung cancers in males and 4-5 years for breast and cervical cancers in females. An indication of improvement in survival indices was observed in females. Given the difficulties in conduct of classical survival studies, the proposed method may provide a useful tool for the study of survival, especially for 'all sites' and major sites of cancer, viable for the developing countries. Proposed method may also be useful in having a regular audit of the prognostic factors prevailing in a population. Further, it also has potentials to be utilized for the estimation of various indices of burden of disease, like, PYLL, DALY, etc.

**Keywords:** Indirect survival study – life table technique – cause elimination approach - competing risk – average duration of disease – developing countries – cancer – India.

**An Insight into Men's Experiences of Involuntary  
Childlessness - A Study of Rural Childless Men in Andhra  
Pradesh**

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**Thesis Submitted for the Award of  
Doctor of Philosophy in Population Studies**



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## ABSTRACT

Inability to have children is a possibility for both men and women. However empirical studies on male perspective of infertility in the area of reproductive health are very few in number. Male infertility still remains a topic of relative neglect as compared to female infertility as fertility has always been considered a woman's domain. This study aims to provide the male perspective that is often lacking in studies concerning infertility focusing primarily on understanding how men perceive infertility, the importance attached to a biological child vis a vis an adopted one, their take on New Reproductive Technologies and lastly to explore the consequences of childlessness on men in a patriarchal society like ours where men also have to prove their virility. The study has been carried out among currently married childless men in thirty villages in the Ranga Reddy district of Andhra Pradesh. The methodological framework of the present research study is based on a study entitled "*Socio psychological consequences of childlessness among women in Andhra Pradesh*" (Unisa 2001). For the above study, in order to obtain the sample of childless women firstly all the villages in the Ranga Reddy district were grouped into three strata in ascending order of female literacy. Ten villages were then randomly selected from each stratum. All the households in the thirty villages were screened in order to identify the childless women. The selection of the sample for the present study is drawn from the already identified childless couples by the study entitled "*Socio psycho consequences of childlessness among women in Andhra Pradesh*" (Unisa 2001). Husbands of childless women aged 20-49 years and with at least three years of marital duration were selected for the interview. Semi structured interview schedules consisting of closed and open ended questions were used for data collection.

Majority of the respondents were Hindus and belonged to other backward classes. Mostly all lived in nuclear family households with quite a few being in polygamous unions. Very few had an adopted child, and a sizeable section of them were literates. Majority worked as agricultural laborers or cultivators and belonged to modest households (medium standard of living). Knowledge about the basic principles of human reproduction and about fertile period is scanty among the respondents. Men whose wives were literate possessed better knowledge in comparison to men whose wives were illiterate. Standard of living and treatment seeking showed a positive impact on the knowledge variable. Bivariate analysis shows a positive association between education, occupation, standard of living and mass media exposure with knowledge of fertile period. Regarding the need for a biological child, social and economic compulsions emerged as pressing concerns for having a biological child. Commonly expressed reasons for wanting to have a biological child were continuation of family lineage, fulfillment of family rituals and old age care. With an increase in the number of years of marriage, a greater need was felt for a child of one's own. Men who had not adopted a child showed more anxiety for a child compared to men with an adopted child. The anxiety and desperation for a biological child was equally present among all the men interviewed irrespective of their standard of living. Explanations regarding causes of infertility ranged from the physiological to supernatural to other psychosexual disabilities. Level of education of the respondents had a direct bearing on the respondent's views on causes of infertility. Most of the men's first reaction tends to be that it is mainly the woman who is

responsible for infertility. Treatment methods varied from allopathic to herbal to traditional methods of treatment. Doctors in the private hospitals and nursing homes were initially consulted as the first choice of treatment. When the desired results were not achieved after several courses of treatment at the private clinics, there is generally a shift towards other conventional and home based treatment methods. Higher the level of education and the better the occupational status, greater was the preference for allopathic treatment. This study also reinforces the idea that economic status of the household and occupational status surely influences the type of treatment chosen. Treatment cost increased almost three and half times for treatment in private hospitals as compared to public hospitals which posed a heavy financial burden for many respondents. There is a lot of apprehension before starting the treatment. Monetary cost and success of the treatment, disruption of routine activity were the major concerns. Financial help for treatment and help in seeking medical advice were mainly rendered by friends.

The reactions were varied with respect to modern reproductive techniques. Many had reservations about the high cost of treatment and preferred the natural mode of conception. On the other hand there were some who were quite optimistic and were positive about these methods. Child adoption was generally seen as a last resort, only when other treatments have been abandoned for their lack of success. For quite a few child adoption had led to an improvement in their marital relationship. Regarding relationship with their wives, many shared a very loving and companionate relationship with their wives. Treatment seeking, though, turned out to have a negative impact on a couple's relationship. Couples without any financial or moral support seemed to have better inter spousal relationship, compared to couples who have some support system. Verbal abuses towards these men by their family members in terms of taunts and abusive remarks towards the wife is quite evident which kept them away from their relatives as far as possible to avoid any embarrassing questions or situations. Pressure for remarriage from parents and wives was quite evident. At the community level married men were made to feel inferior or an outcaste. Derogatory terms were often used to abuse them. Some of the couples had to leave their villages and migrated to other places, so as to avoid such negative remarks from friends and neighbors in the village. At the personal level taunts and uncomfortable questions by the colleagues had lowered their levels of confidence and alienated them from the work place. Regarding attitudes towards self, younger men with shorter marital duration had more positive attitude towards self. As marital duration increases and with increasing age, a sense of fear and uncertainty creeps in about not being able to have a child resulting in low self esteem. Also those who have sought treatment and have some kind of support from family and friends had a more positive attitude towards self compared to their counterparts.

The present study brings into light the experiences of childless men in their social personal and cultural contexts. The study clearly shows that childless married men do face humiliation, insults, as a result of theirs or their wife's infertility, and do feel inferior and low for not being able to father a child. Childlessness is a stigma, irrespective of who is responsible the man or the woman. Culturally sensitive programmes should be developed, so that childless/infertile man can cope with their problems and improve their lives. Equally important is the role of the health workers and social workers at the community level, to counsel men and childless couples in terms of fertility clinics and hospitals and allay their fears and concerns regarding childlessness.

**DEMOGRAPHY OF AGEING AND EXTENT OF ELDER ABUSE: A  
STUDY OF PATHANAMTHITTA DISTRICT IN KERALA**

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**Thesis submitted for the Degree of Doctor of Philosophy in Population  
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## Annexure – II

### Abstract

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Although the proportion of India's elderly is small compared with that of developed countries, still it is very large in terms of absolute numbers. Providing care for the aged has never been a problem in India where a value-based joint-family system was dominant. However, the coping capacities of the younger and the older family members are now being challenged under various circumstances resulting in neglect and abuse of elderly in many ways. In this context, the present study tries to assess the magnitude and nature of elder abuse and the factors which contribute to abuse in the families and in old age homes.

The present study utilizes both primary and secondary data. Secondary data analysis was based on Census of India and two rounds of NSSO (52<sup>nd</sup> and 60<sup>th</sup>). The primary survey was conducted in households and old-age homes of Pathanamthitta district in Kerala. The information were collected from 300 elderly (60+ years) on their socio-economic and demographic characteristics, details of children, living conditions of elderly and their preferences in living arrangement, economic dependency, health condition and intergenerational relationship. A separate section was dedicated to understand the abuse and neglect of elderly- physical, verbal, material and neglect. In order to understand whether abuse was experienced by the respondent, a modified form of Hwalek-Sengstock Elder Abuse Screening Test (H-S/EAST) was used. To examine the psychological implications of abuse and neglect of elderly, Geriatric Depression Scale (GDS) has been used. The information was also collected from 100 elderly living in old age homes in the study district. Both quantitative and qualitative techniques used for data collection. An interview schedule was administrated to collect information from all elderly respondents. Case studies and key informant interviews were conducted to collect qualitative information. Univariate, bivariate and multivariate techniques were used in the analysis.

While analyzing the magnitude and nature of elder abuse, it was found that nearly half of the respondents have experienced some form of mistreatment from their family members. More than one-third elderly experienced verbal abuse and neglect. One out of ten elderly were financially exploited by their own relatives. Present study indicates that elderly above 70 years, female elderly especially widows, those who are living alone, physically immobile and economically dependent are more vulnerable to abuse and neglect than others. The main perpetrators of elder abuse are sons, sons-in-law and daughters-in-law. Nearly three-fourth of the respondents from old age homes experienced some form of abuse in their families before joining the old age home. The study revealed that abuse and neglect by the family members were mainly responsible for the elderly's decision to leave home. However, more than one-third of them stated that they also experienced abuse in old age homes. It is not only the poor, but even the rich are vulnerable to various forms of abuse and neglect, though the nature of abuse may vary. The elder abuse and neglect which received very little attention so far in India would require more attention and investigation in coming years.

**REPRODUCTIVE MORBIDITY AMONG WOMEN  
IN URBAN SLUMS OF MUMBAI**

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In  
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## Annexure I

### Abstract

Reproductive and sexual health is a right for both men and women – so agreed by 180 nations at the International Conference on Population and Development (ICPD) in Cairo in 1994. The nations declared their goal: To achieve universal access to reproductive health, information and services by the year 2015 (The right to choose: UNFPA). India has taken a lead to begin the process of translating the recommendation on health from Beijing and Cairo Conference into its national program

In this regards the ever increasing slum population in the numerous cities of the country, caused by the constant in-migration of poor, uneducated and unskilled people from rural to urban areas, and are to be considered as a separate entity demanding special understanding, policies and strategies in an effort to achieve the goal of better health for them. This is important as a sizeable proportion of India's urban population resides in slums. There is, thus, an urgent need to look into the problems of slum population who often remain beyond the reach of various services under the national health program.

This study is an attempt to explore, prevalence of self-reported reproductive morbidity, various determinants of reproductive morbidity, treatment seeking behaviour and its impact on women's life. To assess the status of women's health, considering not only the socio-economic, demographic and developmental factors but also the linkages between women's health status with the existing cultural scenario which includes women's autonomy and perception has taken into consideration.

For this study eight slums from four wards of Mumbai were selected using Probability Proportional to Sample Size (PPS) sampling method. After listing the households, 440 households were selected using Systematic Random Sampling method. Out of these households, 400 currently married women in the age group of 15-45 years were interviewed. To supplement the survey data at different points of investigations by adopting various qualitative techniques, such as key informant's interviews and in-depth interviews with health care providers has been conducted. The data was analysed with software packages like EXCEL and SPSSWIN 14.0. Quantitative data in the present study is analyzed by frequency tables as well as bivariate tables. Information collected through observation technique is presented in the text form. For analysis purpose various indices like, economic related decision making index, health related Index, children related Index, intra spousal communication Index, friends and relative Index, mass media exposure Index and women's autonomy Index have been constructed by using scaling techniques.

Out of 400 currently married women 55 percent women reported menstrual related problems, 24 percent lower abdominal pain, 21 percent white discharge and only six percent urinary tract infection. The study reveals that women belong to age group 26 years and above and women married before 18 years reported higher gynecological

morbidity, spontaneous abortions than their younger counterparts except in the case of urinary tract infection. Nearly half of the women prefer homemade remedies to cure reproductive morbidities. Women who seek the allopathic treatment, around three fourth of them seek treatment at private clinics. It is observed that majority of women still perceive gynecological morbidity is part of womanhood and felt it is normal for women. The knowledge about modern spacing methods is higher among women than traditional spacing methods. More than 80 percent reported that reproductive morbidities affect general health followed by sexual health.

The study recommends to improving the health status of slum dwellers, approaches like intensive training of community based health workers, local youth club or local women's group members, the involvement of traditional leaders and improvement in local delivery of health services can help in achieving desirable results. There is need to create awareness about individual level practices and behaviour, particular regarding menstrual hygiene, personal hygiene and safe sex practices among men and women. Capacity building of medical staff at government hospitals, short term courses on counseling and communication for government medical practitioners and effective public-private partnership is needed for improving access and utilization of health services for slum dwellers.



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ICES

# Some Socio-economic and Demographic Factors Affecting Maternal Health Care Utilization: A Study of Mainpuri District in Uttar Pradesh

By

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2010

## Some Socio-economic and Demographic Factors Affecting Maternal Health Care Utilization: A study of Mainpuri District in Uttar Pradesh

### Abstract

The concept of special care during the antenatal period has been traditionally recognized in India, with pregnancy associated with a number of cultural practices, ranging from special diet to special rites (Jejeebhoy and Rama Rao, 1995). The Millennium Development Goals (MDGs) are to be achieved by 2015. **Hypothesis-1.** Higher the living standard, higher the utilization of maternal health care services. 2. Higher women autonomy leads to higher utilization of maternal health care. 3. Proximity of health facility leads to better utilization of maternal health care. The broad **objective** of the present study is to examine the effect of socio-economic and demographic factors on maternal health care utilization among women of reproductive age. **Samples-** For the selection of women, a complete house listing was carried out for identifying women (aged 15-49 years and at least one living child aged 0-3 years) in the household. The identified women and their household were finally selected for interview randomly. It was initially proposed to interview 400 eligible women from 400 households (50 women from each village). But considering any type of refusal factors 53 households for the eligible women were visited in the each village and successfully, collected information from 411 households as well as 414 eligible women. **Tools and Techniques-** The survey was conducted with the face- to face interview techniques using two type of instrument in Hindi language namely- Household Questionnaire and Woman Questionnaire. **Analysis-**The study data has been analyzed with the help of simple statistical techniques such as Uni-variate, bi-variate, and averages. Multivariate analyses are also carried out in the study to understand the inter-relationship between various variables.

**Findings-** The study shows that basic knowledge of the nutritious components during pregnancy is lacking among the sampled women. For example, regarding green vegetables, milk and its product, fruits, and dry fruits, only 64 percent, 76 percent, 71 percent, and 81 percent of the women were found to have knowledge during pregnancy respectively. In the present situation every women should know about antenatal registration. Because of many programmes related to maternal health care run by the Indian and state government and the services are also providing free of cost in the government health facility. But, the study was found that only 90 percent currently married women know that antenatal care (ANC) registration is essential during pregnancy. Knowledge about maternal health care components such as iron tablets (82 percent), TT injection (90 percent), place of safe

delivery (45 percent), and assistance of safe delivery (66 percent) is quite low among the sampled women as compared to the goals set in National Health Policy, 2000. The overall information education and communication (IEC) component of the programme in the Mainpuri district of Uttar Pradesh is seemingly weak.

Maternal health care utilization was found far below compared to the knowledge on maternal health care. Only 68 percent of the women availed at least one antenatal check-up during the last birth preceding three years. Eighty percent registrations were found among the women who had 2 to 3 surviving children. Higher birth order was negatively associated for the antenatal care registration. A higher proportion of the women were registered for ANC during the second trimester (3-6 months) of pregnancy as compared to first trimester (0-3 months). Only four percent women are found to be availing full ANC in the sample. A large numbers of deliveries (90 percent) did occur at home and were attended by untrained persons (73 percent). The hypothesis regarding utilization, higher the living standard, higher the utilization of maternal health care, is accepted for full ANC coverage as well as delivery care and it is also accepted that proximity of health facility lead to better utilization of maternal health care as far as full ANC coverage is concerned.

The major barriers related to non-utilization of maternal health care services are lack of felt need and lack of knowledge. From the side of family, lack of cooperation from husband emerges as another important barrier in the process of utilization of maternal health care services. Findings from Logistic regression analysis clearly suggest that increase in age, distance of health facility from home, lack of wider social support in village in the form of joint family, lack of exposure to mass media (radio/TV), not provided with permission to go out and lack of permission to spend money on anything or even on their health are major factors against availing the maternal health care services.

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## *Impact of fertility decline on child schooling in India*

*Student: Puspita Datta*

*Guide: Prof. F. Ram*

### Abstract of the thesis

**Background of the study:** In almost all the education-fertility research, education is most commonly assumed as the main factor behind fertility decline. But when several survey results are showing that over the decades fertility has declined and at the same time educational level has increased, it can be said that these two simultaneous changes must be linked. Therefore, it becomes imperative to see how fertility decline can influence educational attainment, which is not widely researched, especially in case of India. So far most of the researches focused on how the educational attainment is influencing in shaping the demand for children of the people of the same generation. With the explicit fact that educated parents generally send their children to school and it is more among the urban areas, the present study is an attempt to observe the next generation effect of parental fertility on child schooling among the rural illiterates in India. More specifically the study objectives are to examine the impact of fertility decline on child schooling; to observe the gender and birth order effect on child schooling; to explore the nature of relationship between fertility and child schooling –whether there is simultaneity i.e., fertility and child schooling decisions both-way related or causality i.e., only fertility is affecting child schooling in a unidirectional way; to observe the role of aspiration for child schooling and perception about child schooling and also the reasons for non-schooling in the context of fertility decline.

**Data and methods:** The study uses secondary datasets from the three rounds of NFHS surveys and also uses primary survey data collected from the mother of the children who's both parents are illiterates in the Kaliachak-III Block of Malda district West Bengal. The study uses simple two-way diagrams, Z-test, bi-variate and multivariate logistic analysis to fulfill the objectives of the study.

**Main findings:** To control the effect of parental education and other diffusion effect of education, the present study considers only the rural illiterate parents and the results show that smaller the family size more is the child school attendance. Results show that due to fertility decline the children will be benefited by getting higher enrollment in school. From 1992-93 to 2005-06 the reduction in family size became more important factor compared to other influential factors to improve child schooling, which indicates the strengthening of the relationship over the years. Though contraceptive practice of parents can indirectly affect child schooling through its influence on family size, it has a direct positive effect on schooling. Significant sex and birth order differentials are also found to exist. The girl child of any birth order is deprived more from schooling compared to a boy child of the same birth order, especially earlier born girl children are more unprivileged. It is found from primary survey data that among rural illiterates, the existence of simultaneity is less compared to causal relationship between fertility and child schooling. But from the changing aspiration and decision about child schooling, it can be said that though there involve the simultaneity in the fertility child schooling relationship but it is happening in a sequential manner and thus it is actually a causal relationship. The results indicate that the users of contraceptives are behaving in more rational way to materialize the educational aspiration for their children in to reality, whereas the non-users, though they are also having the aspiration to educate their children, a larger proportion of them are not able to send their children compared to the users group.

**Conclusion:** It can be said that not only schooling can influence the people to achieve their desired smaller family in the context of fertility decline, on the other hand the smaller family during fertility transition can be helpful for fulfilling the target of achieving 'education for all'. It can be said that girls are in more advantageous position to gain from the decline in fertility than the boys. It can be concluded from the results that the existence of quantity-quality tradeoff in a true sense is very rare among rural illiterates, though the situation is changing and it can be observed from the behaviour of the young couples. It can be concluded from the policy and programme point of view that rather than treated side by side the fertility control programme need to be integrated with the education program on the same platform.

# Inequities in Health, Health Care and Health Care Financing in India

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## ANNEXURE II

### *Abstract*

**Objectives:** The present study makes a concerted effort to explore the significant changes that appeared to have occurred in 1990s and early 2000 in relation to the various dimensions of health inequities in India and sixteen major states. To be specific, it seeks to examine the following objectives: (a) the differences in health status and changes in health care needs across the various socio-economic groups; (b) the changes in the horizontal equity in outpatient and inpatient care utilization; (c) identify the factors responsible for the choice of health care providers; (d) assess the levels and trends in household health expenditure and the economic consequences of out-of-pocket health care payments and (e) (v) investigate the reasons for non-utilization of health care.

**Data and Methods:** Data from the National Sample Survey on 'morbidity and health care' and 'consumption expenditure' undertaken in 1995-96 and 2004 and 1993-94 and 2004-05 respectively have been used. Chi-square, logit regression models, double-hurdle model, binomial regression model and concentration indices have been employed.

**Findings:** In accordance with the rise in reported disease prevalence, a significant increase has been observed in both outpatient and inpatient care utilization at all-India level with evidence also pointing to increasing inter-state differences during the study period. The results of double-hurdle model for outpatient care utilization suggest that once the initial contact is made, further visits are not affected by the socioeconomic status of individuals. The principle of horizontal equity in probability of visiting an outpatient provider has been more or less achieved in Kerala, Punjab, Himachal Pradesh and Haryana during the period 1995-96 to 2004. Rest of the states, including the economically less performing ones, which had a pro-poor distribution in 1995-96, showed a greater concentration of outpatient utilization among the rich in 2004. Evidence clearly shows that the need-standardized income-related inequalities of 'hospital admission' have narrowed in every state during the study period. While Kerala had pro-poor inequity in hospital admission, rest of the states showed pro-rich inequity in hospital admission. However, majority of the states have achieved pro-poor distribution in mean length of stay.

An overwhelming majority of the people preferred private sector over public sector for ambulatory care, mainly because of quality concerns. The outpatient care utilization from the private sector was found to be highest in the economically less performing states in which the public spending on health is abysmally low. The proportion of poor accessing ambulatory care from public sector has increased over the study period. With increasing use of private sector for inpatient care during the period 1995-96 to 2004, there has been a decline in rich-poor gap in accessing these services. Even though the level of utilization of inpatient services of public sector was much lesser than that of the private sector, it was found to be the major provider of inpatient care for the weaker section including the poor and scheduled caste and scheduled tribe people. The results of household health financing analysis suggest that the incidence of catastrophic expenditure and impoverishment has increased considerably over the study period. In 2005, more than 42 million people have become impoverished due to OOP health payments. The maximum brunt of the increase in medical expenditure was borne by those who could not utilize health care because of financial reasons and whose sickness remained untreated. Evidence shows an increase in the level of untreated illness during the period 1995-96 to 2004. It is particularly worrying to note that the proportion of poor people not accessing health care because of financial considerations has increased over the study period.

# Potential Role of Health Insurance in Health Care Utilization and Quality of Care: A Study of Rural West Bengal

Avishek Hazra

## Abstract

**Background:** The increasing cost of health services is a burning issue of concern in the arena of public health. Health care costs, especially high out-of-pocket expenditure on health care, have a devastating effect on the lives of low-income individuals, often impoverishing them. Insufficient or poor quality of public facilities around the country drives people towards seeking private care that obviously comes at a significantly higher price, further impoverishing the households. The cost of health care has increased enormously over time in India. This reconfirms the need to extend risk coverage to the population. There has been a growing concern over the last few years with the increasing cost of health services and the existing mechanisms for financing health costs.

**Objectives:** The present study has tried to address the importance of health insurance for equitable healthcare utilization, and whether health insurance can be a healthy option for healthcare financing in India. The specific objectives are to (i) observe the state wise variation in health insurance coverage and to analyze the extent of health care service utilization by insurance status; (ii) assess the impact of Employees State Insurance Scheme on health care utilization and to examine the effectiveness of health insurance to protect households against financial catastrophe; (iii) investigate the quality of care provided in the health facilities under the ESI scheme and whether it affects health care utilization among the insured or not and (iv) examine people's awareness, willingness and ability to pay for different types of health insurance schemes.

**Data and Methods:** Secondary dataset of World Health Survey (2003) and National Family Health Survey-3 (2005-06) and also dataset of a primary survey conducted in two districts of West Bengal have been used. The study accentuate on Employees State Insurance Scheme (ESIS), a social health insurance meant for social security and which is one of the major flagships of the health insurance schemes directly run by the Government. Primary data have been collected using a two-stage stratified random sampling procedure from 400 households and following an exit interview technique information regarding quality of care has been gathered from 150 patients who availed treatment from ESI service-dispensaries and hospitals. To empirically assess the impact of scheme membership on healthcare utilization and financial protection, a two-part model has been used and to assess the catastrophic impact of healthcare payments, incidence and intensity of catastrophic healthcare costs has been measured. A composite index of quality of care has been constructed to depict the quality of care provided in the ESI facilities.

**Findings:** Insurance coverage is very low among the people of lower income quintiles, and they spent a larger share of their income to meet healthcare costs. Results also suggest that at the lower thresholds, incidence of catastrophic health costs is more concentrated among the poor and by contrast, at the higher thresholds, incidence of catastrophic health costs is more concentrated among the rich. Although, the regression analysis indicates that households having ESI scheme tend to utilize health care services more compared to those without any health insurance, it is essential to note that the ESI-insured members in spite of being entitled to receive facility from the ESI-health facilities, largely depend on the private practitioners and thus risk-reduction outweighs quality of care among those who are insured. The awareness about the exiting health insurance scheme is low, but still willingness to join a community based health insurance (CBHI) scheme is substantially high in the study community. The study recommends few mechanisms how best the healthcare services can be offered to the poorer people and that may work out as a supporting option to get rid of the threat of catastrophic health payments and debt-trap.

# STREET ADOLESCENTS OF KOLKATA: A STUDY OF THEIR VULNERABILITIES

By

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*Thesis submitted for the award of*

*Doctor of Philosophy*

*In*

*Population Studies*



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### Appendix 9: Abstract of the thesis

**Backdrop:** The increasing numbers of street adolescents in India is one of the most serious urban social problems that the nation is facing today. A majority of these adolescents are illiterate and live in conditions of severe deprivation; inadequate nutrition; long working hours. Exposure to adverse weather and physical abuse while on the streets endangers their physical, mental, and social development. The survival and social behaviors of street adolescents cause them to be vulnerable to various mental and physical health problems. The public health impact of poor health status among street adolescents is significant at several levels. When disability and death occur in street adolescents, there is substantial loss to potential years of life, potential work and income, and potential contribution to society. Thus, it is important to improve the quality of life of the street adolescents through exercising their basic rights. With such an aim in mind, this study presents the vulnerabilities among street adolescents of Kolkata.

**Objective:** The study seeks to find out various vulnerabilities among street adolescents of Kolkata.

**Hypothesis:** The study hypothesized that the survival strategies of street adolescents put them at risk of many adverse physical and mental health outcomes.

**Methodology:** The present cross sectional study was undertaken in Kolkata Metropolitan Development Authority (KMDA) area, during January 2007 to April 2007. A total number of 408 street adolescents (311 males and 97 females) aged between 13-19 years were interviewed from 43 Time Location Clusters (TLCs), using quantitative and qualitative techniques.

**Findings:** This study provided a demographic and behavioral profile of street adolescents in KMDA. More boys than girls were found on the streets and girls tended to be younger than boys. Nine out of every ten street adolescents were migrants. The majority of them were living with their parents on the streets, and the duration of living was less than two and half years. Educational attainment of the study population was very poor. Economic reasons and attitude related reasons were found to be the important factors for the non attendance or discontinuation of schooling. The average per day earning of adolescent boys was Rs.36 and for girls was Rs.32. A major share of their earning was being spent on tobacco or other substances. This study provides a glimpse of different vulnerabilities of street adolescents in terms of physical, emotional and sexual abuse. It was found that irrespective of sex, physical and emotional abuse was very high among street adolescents. Higher reported incidence of sexual abuse among boys disproves the popular myth that boys cannot be the victims of sexual abuse. The substance use rate among street adolescents was very high. This study also provided a unique finding in terms of prevalence of self-harming acts. The majority of the participants had some knowledge of how HIV is transmitted and can be prevented. The study showed differences in the dynamics of initial sexual experiences for males and females: while more males reported having their first sexual experience voluntarily and for fun, females reported more rape and forced sexual encounters. Female street children were more vulnerable to sexual exploitation both in their pre-street home and while on the streets.