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Poverty and Maternal Health Care Utilisation in Patna: Associated Influences on Infant Mortality

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Abstract – The utilization of maternal health care services is a complex phenomenon and influenced by several factors. India is one in developing nations with a high rate of maternal mortality. Government launched many maternal health care (MHC) programmes to reduce MMR and some other maternal and child health complication. But, it still lacks behind to fulfil Millennium Development Goal. This study aims to describe the effect of poverty in utilisation of maternal and child health services and to explore the barriers in utilization of maternal health care services.

Keywords:- Maternal Health, Child Health, Poverty, Utilisation of Services

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INTRODUCTION

Attaining improved maternal health status has been top most priority to the government of India since its first five year plan (1951-56) in order to reduce both maternal and child mortality. The target continued to reinforce year after year and it has also been reflected in recent population policy-2011 within the wider context of reproductive and child health program, and through the commitment towards achieving millennium development goal 5. Over the last few decades, although India has witnessed success in terms of reducing both maternal and child mortality, the level remain still very high as compared to that of any developed nation. India is still home to huge maternal deaths per year which accounts almost one-fourth of all maternal deaths of the world even after the decline of mortality ratio to 230 from 390 for year 1990 to 2008. Similarly, child mortality rate in India is considered to be very high as compared to developed nations despite the fall to 18 from 33 for the period 1991-92 to 2005-06.

Equal access to health care has been viewed as one of the prime concern towards ensuring 'Health for All'. However, in many parts of the developing world, a number of inhibiting factors prevent such equality in access to and utilization of health care services. Inequality in health care is considered to have different dimensions, based on an individual's age, place of residence, economic ability, ethnicity and gender. Among these domains of inequality, poverty, manifest in absence or deficient economic power remains as one of the most powerful barriers towards utilization of health care. Evidence around the world suggest that, being poor is positively correlated with poorer health status and negative health outcomes, much of it responsible to poor uptake of preventive, promotive and curative aspects of health care services by these groups of people belonging to the lower economic strata. Public provisioning of health care services across the developing world had provoked questions regarding identifying the proper beneficiaries as the target of public subsidies and carefully oriented policy measures aimed at ensuring equal access and use of health services among these disadvantaged population groups. Women and children among the poor are more vulnerable in terms of access to health care. In other words, maternal and child health care services are more likely to demonstrate sharp inequality in utilization. There is a general consensus that maternal care plays a crucial role in the improvement of women's reproductive health in developing countries (Magadi et al. 2000, Bhatia and Cleland 1995, Becker et al. 1993). Among the reproductive health parameters, antenatal care (ANC) and safe delivery has important position as these are directly related with maternal mortality, loss of fetus, loss of infant etc. Antenatal care comprises of routine health check up by a doctor, consumption of iron supplement and injection of tetanus toxoid vaccine during pregnancy. Delivery conducted by health professionals (doctor, nurse, auxiliary nurse midwife and trained Dai) ensures safety of mother as well as the child.

In the Indian context, however, there is a dearth of quality studies aiming to analyze the extent and causes of economic inequality leading to inequality in access and utilization. The main reason may be attributed to the lack of information regarding household income or consumption in most of the demographic and health surveys (DHS). A recent

work based on the Indian National Family Health Survey , found full vaccination rates to be about four times higher in the richest quintile than the poorest, and observed similar patterns for medical treatment of acute respiratory infections. Probability of child deaths was also found to be inversely related with household wealth status (Rutstein & Johnson 2004). For maternal care too, more than three antenatal visits to health facilities were about four times higher in the richer households. The major issues that emerge from the review of earlier studies suggest that inequality in access and utilization of health services is a global phenomenon, and economic ability is an important determinant of the care-seeking behaviour, particularly for the poorer households. However there is also some evidence asserting that inequality is much less in the domains of preventive health care, with higher dependence of poorer households for services like maternal health care and immunization on the publicly provided services, because most of this services, at least on principle, are generally free or charged nominally. The reproductive and child health service is a key component of the publicly provided basic health services. The National Population Policy (NPP 2000), National Health Policy (NHP 2002) and National Rural Health Mission (NRHM 2005) emphasized enhancing the utilization of health services in general and reproductive health services in particular among poorer and disadvantageous segment of the population. The question that naturally arises involves defining the poor and examining the situation of the poor relative to other groups in maternal and child health care utilization and health outcomes.

In a developing country like India beset with the problems of maternal morbidity and mortality, ill health and death among infants and children in large parts of the country, policy efforts and programmes exist since a long period of time involving various steps of the government to combat with this problem. District Level Household Survey (DLHS) under the Reproductive and Child Health (RCH) project is one of them, directed to supplement evidence of maternal and child health problems, utilization pattern and quality and competence of service provided. The maternal and child health (MCH) programme was started in India in the early 60s. In the 1960s and 70s, maternal health services within the programme focused on antenatal care and the high-risk approach, but nevertheless the level of maternal mortality remained high in the country until mid-1980s. It is believed that good antenatal care and training of traditional birth attendants to improve their delivery practices may help in reducing maternal mortality. With an aim to improve health status of women and children and to reduce maternal morbidity and mortality, Child Survival & Safe Motherhood (CSSM) programme was launched in India on 20th August 1992. The CSSM envisaged the package of the following maternal health care: early registration of pregnancy, at least 3 antenatal check-ups, universal coverage with TT vaccine, universal coverage with IFA tablets, advice on adequate food, nutrition and rest, timely detection/identification and referral of obstetric/maternal complications, clean deliveries by trained personnel, promotion of institutional deliveries especially for the women with obstetric history and risk factors, and birth spacing. In spite of these efforts and programs, maternal and child health situation in the country has not improve remarkably. Women more specifically rural women, do not attend to their most common health problems (Hazra et al. 2005). The World Bank report has rightly remarked that although government programmes in India have gone a long way in reducing the number of women dying from maternity related causes, the number of pregnancy related deaths in rural areas in the country is still among the world's highest.

DEFINITIONS:

Any Ante Natal Care: Those women who receive any antenatal care like four and above antenatal visits or received two or more tetanus toxic (TT) vaccine during pregnancy or took 100+-iron folic acid (IFA) tablets were considered as Any Ante Natal Care.

Full ANC: Those women who had taken four and above antenatal visits, received two or more tetanus toxic (TT) vaccine during pregnancy and took 100+-iron folic acid (IFA) tablets are considered as full Ante Natal Care.

Institution Delivery: Those women who delivered their baby in any health institution (public or private) were considered as Institutional delivery in the current study.

Post-Natal Care (PNC): Those women who received postnatal care within two weeks after delivery is taken as women with Post-Natal Care.

Child Immunization: A child who received BCG, three doses of oral polio vaccine ,three doses of DPT and measles vaccine before age of one year.

ASSOCIATED INFLUENCES ON INFANT MORBIDITY AND MORTALITY

The effects of low standard of living on MHC use are clearly shown in the study. These influences are net of other social and demographic factors such as women's education and employment. Associated influences of standard of living on infant mortality and morbidity have been suggested by previous research. Adverse effects of poor, late and infrequent uptake of antenatal care and home deliveries have been particularly noted in connection with neonatal mortality outcomes (Beenstock and Sturdy, 1990 and Stephenson, 1998). In this section the effect of standard of living and place of residence and the use of antenatal

care on infant health and mortality outcomes are modelled using child health and mortality outcomes whilst controlling for other social and demographic factors. Mosely and Chen (1984) show that infant health outcomes are strongly linked to mortality if a child is not given adequate nutrition and medical intervention during a disease episode. Mortality is an easily defined and measurable event that can be investigated using the NFHS survey data. Neonatal mortality in particular is an important outcome in relation to maternal health care factors. Previous studies of the all India NFHS data have shown that the place of delivery, antenatal care use, and frequency and timing of visits are associated with neonatal mortality outcomes, but not with later mortality outcomes (Stephenson 1998). The prevalence of ill-health among children is more widespread than mortality, and is potentially also linked with maternal health care outcomes and standard of living.

DISCUSSION:

The results of this analysis suggest that the study of the utilisation of maternal health care services in India cannot be conceptualised merely in terms of a simple urban / rural dichotomy. For antenatal care and place of delivery it is clear that a 'living standard' gradient exists, such that differentials exist in the utilisation of MHC services. Those in the urban and rural lower status groups consistently display lower rates of antenatal care utilisation, characterised by few visits timed late into pregnancy, and deliver less often in private institutions and more often at home. Previous literature has shown that the use of antenatal care has consequences for the survival prospects of neonates, and that the timing of antenatal care in the pregnancy is an important predictor of neonatal mortality (Stephenson 1998). Hence those in the lower socio-economic strata are experiencing patterns of MHC utilisation associated with increased prospects of neonatal mortality.

Socio-economic variables such as education and employment are strongly related to uptake of services, and choice of 'safe' services in developing country settings (Stephenson 1998). Women from poor communities in urban areas in India are often not educated, of low caste and poorly paid. These factors in themselves compromise service use and subsequent maternal and child health. Aspects of women's autonomy such as freedom of movement, decision-making power, control over finances and support from natal kin can also be constrained in a slum setting although it is not clear to what extent. The status of women in slum families is low and this is likely to influence maternal health care use. Care seeking behaviours have been strongly associated with such factors in urban settings in India in previous studies (Bloom et al 1998, Ramasubban and Singh 1999). Nutrition, an additional but important factor determining the health of both pregnant women and children, is also socially constrained and associated with fasting norms and differential status of family members (Jordan et al cited in Vlassoff et al 1996). It should be noted also that care seeking for health problems related to childbirth and gynaecological conditions is likely to be determined by a different set of factors to service use for children's health problems. There have been a number of studies that focus on utilisation of maternal and child health care services within slum or deprived rural areas (eg Khan 1989, Prasad and Somayjula, 1992). However, few compare women from urban and rural areas with varying standards of living. If we are to understand health in urban settings, where choice and quality are real issues, then maternal and child health services themselves, as well as factors which affect their differential uptake, should be examined more fully.

The WHO estimates suggest that 88-98% of pregnancy-related deaths are avoidable (1996). Bhatia (1993) reported that 78% of maternal deaths occurring in a study population in South India were preventable by timely intervention. Hence, providing quality health care during and after labour and delivery is the single most important way of saving the lives and preserving the health of mothers and babies (WHO, 1996). Antenatal care provides the opportunity for complications to be detected and gives women advice on the management of complications (Abou Zahr, et al., 1996).

Patna, Bihar - Key Indicators

Indicators	NFHS-4 (2015-16)		
Maternal and Child Health	**Urban**	**Rural**	**Total**
1. Mothers who had antenatal check-up in the first trimester (%)	63.5	41.9	51.9
2. Mothers who had at least 4 antenatal care visits (%)	31.6	13.1	21.7
3. Mothers whose last birth was protected against neonatal tetanus(%)	94.1	93.5	93.8
4. Mothers who consumed iron folic acid for 100 days or more when they were pregnant (%)	16.2	25.3	21.1
5. Mothers who had full antenatal care (%)	9.7	6.2	7.9
6. Registered pregnancies for which the mother received Mother and Child Protection (MCP) card (%)	77.9	82.7	80.9
7. Mothers who received postnatal care from a doctor/nurse/LHV/ANM/midwife/other health personnel within 2 days of delivery (%)	54.6	70.7	63.2
8. Mothers who received financial assistance under Janani Suraksha Yojana (JSY) for births delivered in an institution (%)	32.4	62.7	47.8
9. Average out of pocket expenditure per delivery in public health facility (Rs.)	1,323	1,827	1,647
10. Children born at home who were taken to a health facility for check-up within 24 hours of birth (%)	--	0.0	1.2
11. Children who received a health check after birth from a doctor/nurse/LHV/ANM/ midwife/other health personnel within 2 days of birth (%)	5.6	11.5	8.8
12. Institutional births (%)	91.0	82.7	86.4
13. Institutional births in public facility (%)	38.9	60.1	50.6
14. Home delivery conducted by skilled health personnel (out of total deliveries) (%)	2.3	2.0	2.1
15. Births assisted by a doctor/nurse/LHV/ANM/other health personnel (%)	93.2	76.9	84.2
16. Children age 12-23 months fully immunized (BCG, measles, and 3 doses each of polio and DPT) (%)	69.8	69.7	69.7
17. Children age 12-23 months who have received BCG (%)	92.5	86.2	88.8
18. Children age 12-23 months who have received 3 doses of polio vaccine (%)	78.4	72.2	74.8
19. Children age 12-23 months who have received 3 doses of DPT vaccine (%)	86.8	83.9	85.1
20. Children age 12-23 months who have received measles vaccine (%)	86.8	82.3	84.2
21. Children age 12-23 months who received most of the vaccinations in public health facility (%)	72.5	94.1	84.6
22. Children age 12-23 months who received most of the vaccinations in private health facility (%)	23.7	6.0	13.7

Expectedly, socio-economic status of a women and accessibility to health facilities are found to be important as far as utilization of maternal health care is concerned. Gradients in the utilization are found to be very distinct for both socio-economic status and distance to health facility centre. Among many other influencing factors, education, particularly, women's education, household's economic standard and accessibility to health facility are found to be very effective to influencing utilization; the utilization of maternal health care increases substantially with the increase of all these factors. However, when relative comparison comes, household wealth is found to be relatively

more effective than the proximity to health centre towards enhancing utilization of maternal health care services. The evidence stands more farms when other confounding factors to maternal health care utilization are taken into control. A significant difference has been observed in the utilization of health care services between the people those access health centres within their own village and people those access outside the residential village, but that difference does not increase markedly as distance to health centre increases. On the other side, education and household wealth are found to be relatively more effective to enhancing maternal health care; with the increase of both the factors, a sharp increase in has been observed. This finding perhaps strengthens the existing knowledge that 'socioeconomic status of an individual is relatively more important than the proximity to health centre for using maternal health care' observed using NFHS-3 data (2005-06) by Kesterton and others . Cost for health care has been another important barrier to accessing maternal health care services. About 23 per cent of women reasoned high cost for not using ANC and having institutional delivery. This picture is quite natural considering the very high delivery cost that is required to be incurred for accessing maternal health care services, particularly for institutional delivery. It was found, based on one study in Bihar, that average cost per delivery was rupees 1,827 if delivery was institutional as compared to rupees 160 if it was a home delivery amongst the lowest socio-economic group people . As we know, self motivation and knowledge about health care services lead to increased utilization; this study reiterate to fact once again. However, the interesting observation is that only self motivation may not be enough for women using health care. External motivations like motivation from husband, relatives or health professionals are also in need for pregnant women using maternal health care. Amongst these motivational sources, husband and relatives, particularly mother in-law are in the fore front.

CONCLUSION

The present study was to know the inequality due to poverty in the use of maternal health services. There is a need to cover entire pregnant women for use the services provided to them. Mother's education was also found to be significant factor associated with the use of maternal health services.

The findings of the present study are also suggestive of policy actions in the right directions. Maternal and child health services, besides being important in its own right, is also crucial towards attaining favourable health outcomes for the mother and her child. Utilization of such facilities, in a uniform manner among the different population groups becomes imperative from such a viewpoint. As seen in the preceding sections, glaring differences among the population, when segregated based on their economic well-being, calls for corrective action of such imbalances. Factors that can be easily influenced like improved access to facilities, through both supply side initiatives as well as generating social awareness regarding the importance of preventive care, and affordability of the households towards usage of these services needs to be stressed upon in national policies.

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