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SOCIAL DYNAMICS OF INSTITUTIONAL DELIVERY SERVICES IN THE URBAN SLUMS OF DELHI

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ABSTRACT

The urban India has got relatively strong health infrastructure and all kind of health facilities and services. For maternal and child health care several health facilities at deferent levels have been made available and accessible in Delhi but the utilization of maternal and child health service has not been accomplished as per the objectives and targets set in the RCH program. This study has been an attempt to explore the utilization of delivery service facilities and the complex relationships between its social dynamics and prevailing delivery practices in the slum in Delhi. The main objective of this paper is to assess the utilization pattern of delivery services in slum area of South Delhi district. For accomplishing the objective, data have been collected from 251 lactating women through systematic random sampling. Collected data have been analyzed using SPSS version 20. As per the findings there is a high correlation between the level of education of the respondents and utilization of delivery services. For delivery services 84.9% mothers have gone for institutional deliveries and only 15.1% mothers have performed home delivery assisted by trained health workers. Mothers belonging to lower social class have also reported lower percentage of institutional delivery. The respondents working in the private sector have shown higher utilization of public health institutions for delivery of child compared to other occupational groups. The study also revealed that the social classes like caste groups of the respondent have shown difference as higher the caste position higher the institutional delivery in the surveyed slum in Delhi.

INTRODUCTION

With 16.75 million populations in 2011 census of India, Delhi ranked second among the most populous Indian metropolitan cities after Mumbai. The city's population grew annually by 1.92 per cent during the period 2001-2011. More than three fifth of the total area of Delhi is urban. (Economic Survey of Delhi 2013). In Delhi total slum population is 17, 85,390 out of which 7, 38, 915 notified slum population and 10, 46, 475 identified slum population (ORG & CC of India, 2011). This rapid and unplanned urbanization and simultaneous growth of urban poverty in the limited living spaces has a visible impact on the quality of life of the slum dwellers of the city.Though urban India has a relatively strong health and nutrition infrastructure with public sector investments coming from central, state, and local bodies as well as a vast private sector – there is marked inequitable distribution of service availability and utilization between the rich and poor, between the settled urban population and the marginalized slum dwellers. So the attention to vulnerable communities in the slums is needed from a public health perspective, as pregnant mothers and children constitute the major "high risk" group in the given situation (Parika Pahwa *etal,* 2013).

The process of childbearing needs to be given special attention, as it affects the overall health, especially the reproductive health of the woman, as well as health of her new born. The place where delivery takes place is an important aspect of reproductive health care, quality of care received by the mother and the newborn baby depends upon the place of delivery. Currently 30% of the Indian population is living in cities. Delhi is one of the most densely populated cities in the world, and attracts nearly 500 000 migrants every year with

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most settling in urban slum habitations. According to the National Family Health Survey 3 (NFHS 3) conducted in 2005–2006, only 44% of births were institutional among the urban slum dwellers of Delhi as compared with the urban average of 67.5%. (Hazarika, 2010). The District Level Household and Facility Survey (2007– 2008) showed that overall 71% of pregnant women had at least three ANC visits. While 68% of births were institutional in the city as a whole, only 38% institutional deliveries were reported in slum areas (DLHS, 2007-08). But in India, the National Socio-Demographic are directed towards safe delivery viz. to achieve 80 per cent institutional deliveries and 100 per cent of deliveries by trained personnel by 2010.

To promote institutional deliveries, provision to give additional honorarium to the staff has been made under RCH to encourage round the clock delivery services at Primary Health Centers (PHCs) and Community Health Centers (CHCs), including strengthened supply of drugs, skilled manpower on contractual basis and transport facilities to assist women in need (Ministry of Health and Family Welfare (2009). The need for bringing down maternal mortality rate and improving maternal health in general has been strongly stressed in the National Population Policy 2000. Most maternal deaths are avoidable, as the health-care solutions to prevent or manage complications are well known. It has been considered that improving access to ante natal care in pregnancy, skilled care during childbirth, and care and support in the weeks after childbirth reduce the maternal deaths significantly.

This policy recommends a holistic strategy for bringing about total intersect oral coordination at the grass root level by involving the NGOs, Civil Societies, Panchayati Raj Institutions and Women's Group for bringing down Maternal Mortality Ratio and infant Mortality Rate. This crucial importance of maternal health has also been stated by the 5th goal of the United Nations Millennium Development Goals. In order to meet the MDG target, the MMR should be reduced to 109 per 1,00,000 live births by 2015. As per the latest ORGI estimates the MMR status at all India level is at 167 in 2011-13. (Sample Registration System, Office of Registrar General of India, 2013)

MATERIAL AND METHODS

The objective of this paper is to assess the utilization pattern of delivery services provided to women of slum in Delhi. The study has been conducted in two urban slum clusters in the South Delhi District. Through the systematic random sampling procedure data have been collected from 251 lactating mothers having 0 to 2 years children during one year reference period. These respondents have been interviewed in-depth. The techniques employed for data collection are mainly interview and observation. Semi structured interview schedule has been used for interviewing the respondents after pre-testing it in the study area. The data have been analyzed using SPSS and Microsoft Office software. Cross tabulation and simple percentage have been used for data analysis and presentation of results. Statistical test has also been applied. The results of the study have been presented below.

RESULTS

The present study has tried to examine the utilization patterns of delivery facilities availed by the urban slum women. In this context, two types of information have been collected from the fields: a) data relating to institutional delivery, b) deliveries assisted by a trained health worker at the home. As observed the institutional delivery has been performed by almost every mother, but till now due to ignorance or wrong family tradition or because of financial problems, some mothers are not in a position to perform Institutional delivery, though the public health workers have been strengthening some activities for promoting institutional deliveries under different centrally sponsored maternal care schemes in slum areas.

Institutional delivery

Table 1 shows that 84.9% mothers have gone for institutional deliveries and only 15.1% of mothers preferred home delivery assisted by trained health workers. There is no significant variation of institutional delivery found among the income groups. It means that the percentage of child birth taken place is more or less same across the income groups in the slum areas of the city. As observed, the conduction of delivery has varied with the level education of the mothers. The percentage of institutional delivery is found relatively higher among the mothers being highly educated than illiterate mothers. The mothers who qualified higher secondary and above have reported 100 percent institutional deliveries.

It means education of mothers and institutional delivery is highly significant. The percentage of institutional childbirth among the illiterate mothers is found as 71.1% which is much below the average. The percentage of institutional child birth also varies with the social status of the households.It is noted that mothers belonging to lower social class reported a higher percentage of institutional delivery. But surprisingly, 100% mothers belonging to ST category conducted their institutional delivery, is the reserve result compared to urban average. Perhaps, the result reflected by the specific slum characters cannot be generalized in the urban area as a whole. Regarding the association between the respondent's employment characteristics with the percentage of institutional delivery 100% respondents working in the private sector have utilized the formal/public health institutions for conduction of their delivery as the highest compared to other occupational groups. Whereas, mothers engaged as domestic workers (64.8%) are less likely to utilize the formal/public health institutions for conducting their delivery compared to other occupational groups.

Home delivery

According to Table1 about 15% mothers of the slums have conducted their deliveries at home with the help of trained health workers. There is no difference of these home deliveries between the income groups. In the case of educational background 28.9% illiterate mothers have conducted home deliveries whereas 11.4% mothers for the same are from secondary level education. It shows higher the level of education lower percentage of home deliveries in the slum of Delhi city. Similarly, 20.6% SC mothers have conducted home

deliveries which is higher than the general caste groups (7.1%). It also means that the lower the social status has preferred higher percentage of home deliveries in the slum. Among all occupational groups 35.2% domestic servant and 25% petty business mothers have also conducted home deliveries which is the higher compared to other occupational groups. Nothing much variation has been observed on the economic backgrounds of the respondents. Similarly, there is no much variation in their educational background, but illiterate mothers are found more for home deliveries than other educational levels of the mothers.

delivery care services in the slum settings. The responses of the respondents have been analyzed through cross tabulation to articulate the significant trends and relationships between different aspects and their backgrounds as shown in table 2.Table 2 shows that, 64.5% respondents have conducted their deliveries at Govt. hospitals/clinics/nursing home, 20.3% has done it at private hospitals/clinics/ nursing home and only 15.1% respondents have conducted deliveries at home. As per the reproductive age group, 63.6% respondents of 18-25 age group which is having the largest number 165 out of 251 have

Table1. Association of different social factors with place of delivery

Aspects	Levels	Place of Delivery					
		Institutional delivery*		Home delivery assisted by trained health workers		Total	
		N	%	N	%	N	%
Household Income (Rs.)	Below. 5000	17	85	3	15	20	100
	5000-10000	134	85.4	23	14.6	157	100
	10000-15000	30	83.3	6	16.7	36	100
	Above 15000	32	84.2	6	15.8	38	100
	Total	213	84.9	38	15.1	251	100
*Education of Respondent	Illiterate	32	71.1	13	28.9	45	100
	Primary	71	80.7	17	19.3	88	100
	Middle	37	92.5	3	7.5	40	100
	Secondary	39	88.6	5	11.4	44	100
	Sr. Secondary and above	34	100	0	0	34	100
	Total	213	84.9	38	15.1	251	100
Caste	General	13	92.9	1	7.1	14	100
	OBC	64	94.1	4	5.9	68	100
	SC	127	79.4	33	20.6	160	100
	ST	9	100	0	0	9	100
Occupation of respondent	House wife	169	90.4	18	9.6	187	100
	Private Service	6	100	0	0	6	100
	Domestic Servant	35	64.8	19	35.2	54	100
	Petty Business/Shop	3	75	1	25	4	100
	Total	213	84.9	38	15.1	251	100

* For education of respondent and institutional delivery, Chi-square p-vale=0.001 which is highly significant

Table 2. Delivery Care Services utilized by Slum Women

Aspects	Levels	Govt. hospitals/clinics/ nursing home		Private hospitals/clinics/ nursing home		Home delivery assisted by trained health workers		Total	
		N	%	N	%	N	%	N	%
Age of Respondents	18 to 25	105	63.6	33	20.0	27	16.4	165	100
	26 to 35	55	73.3	13	17.3	7	9.3	75	100
	36 to 45	2	18.2	5	45.5	4	36.4	11	100
	Total	162	64.5	51	20.3	38	15.1	251	100
Household Income(Rs.)	Below 5000	12	60.0	5	25.0	3	15.0	20	100
	5000-10000	101	64.3	33	21.0	23	14.6	157	100
	10000-15000	23	63.9	7	19.4	6	16.7	36	100
	Above 15000	26	68.4	6	15.8	6	15.8	38	100
	Total	162	64.5	51	20.3	38	15.1	251	100
Education of Respondent	Illiterate	26	57.8	6	13.3	13	28.9	45	100
	Primary	52	59.1	19	21.6	17	19.3	88	100
	Middle	27	67.5	10	25	3	7.5	40	100
	Secondary	31	70.5	8	18.2	5	11.4	44	100
	Sr. Secondary and above	26	76.5	8	23.5	0	0	34	100
	Total	162	64.5	51	20.3	38	15.1	251	100
Occupation of respondent	House wife	129	69.0	40	21.4	18	9.6	187	100
	Private Service	3	50.0	3	50.0	0	0	6	100
	Domestic Servant	28	51.9	7	13	19	35.2	54	100
	Petty Business/Shop	2	50	1	25	1	25	4	100
	Total	162	64.5	51	20.3	38	15.1	251	100

Delivery Care Services Utilized by Slum Women

Despite the informed knowledge, cultural beliefs and faiths, the respondents have shown the trend of utilization for the

gone through the institutional delivery in govt. hospitals/clinic/nursing homes and only 20% respondents of same category have gone through private hospitals/clinic/nursing homes. At the same time 16.4%

respondents of this younger age group have also gone through home delivery in the slum areas. These percentages are higher as compared to other age groups of the respondents. There is no significant variation between rich and poor in the utilization of delivery care services. The education level of the respondent has varied with the rate of institutional delivery. The percentage of institutional delivery is much higher among the higher educated respondents compared to the illiterate. The illiterate and the less educated respondents have recorded that they are to depend more on home delivery care services. There is no much variation between the social status of the respondents and their delivery care seeking behavior. As observed, the public health system for the delivery care services has increased its coverage in the slum area of Delhi. Surprisingly, the correlation between the household income status and the utilization of the delivery care in public health facilities is found not positive. It means that poor people are using less public health facilities in the selected slums. The possible reasons might be time and distance constraints, including avoiding long waiting queues in the govt. hospital.

Opinion on existing health care services helping / fulfilling the delivery problems

The study has attempted to identify the effectiveness and quality of the present health care system on account of RCH especially delivery services in the urban slum. This has been crosschecked with the backgrounds of the respondents as shown in Table 3.

Table 3. Opinion on existing health care services helping/ fulfilling the delivery problems

Aspects	Levels	Great Extent	Some Extent	Little Extent	Total
		%	%	%	%
Household Income(Rs.)	Below. 5000	36.8	28.9	34.2	100
	5000-10000	55	33.8	11.3	100
	10000-15000	60.3	28.6	11.1	100
	Above 15000	61	28.8	10.2	100
	Total	55	31.8	13.3	100
Education of Respondent	Illiterate	51.1	26.6	22.3	100
	Primary	49.3	35.1	15.5	100
	Middle	68.6	23.5	7.8	100
	Secondary	65.5	25.5	9.1	100
	Sr. Secondary and above	53.8	46.2	0	100
	Total	55	31.8	13.3	100
Caste	General	54.5	40.9	4.5	100
	OBC	59.3	36.1	4.6	100
	SC	54.2	28.5	17.4	100
	ST	41.2	41.2	17.6	100
	Total	55	31.8	13.3	100
Occupation of respondent	House wife	55.9	33.8	10.4	100
	Private Service	66.7	33.3	0	100
	Domestic Servant	49.4	25.9	24.7	100
	Petty Business/Shop	64.3	21.4	14.3	100
	Total	55	31.8	13.3	100

Source: Likert scale

Table 3 shows that 55% respondents have expressed their views that the existing health care treatment mechanism has solved their problems to a great extent, whereas, 13.3 percent respondents have replied towards little extent impact of existing health care treatment mechanism on the delivery problems. There is no significant association between the views of effectiveness on exiting treatment mechanism on solving delivery care problems and economic status of respondents. It is found that the respondents from the poor economic background are less satisfied over the existing health care services compared to the higher economic groups. More than 36% respondents from the poor economic class have informed that they are not satisfied with existing system of delivery care services. The corresponding figure for the upper income class (15000 and above) is 61 percent. It means that the poor are not satisfied with the existing health care mechanism. There is no much variation between the respondent's views on the effectiveness of the system and the educational and the social status of the respondents.

DISCUSSION

In the utilization of delivery facilities and services it has been observed that most of the respondents in the slums have gone for institutional delivery (84.9%) and only few gone for home delivery (15.1%) assisted by trained health worker. This coverage of institutional deliveries has probably been resulted due to the efforts initiated by government health workers under different central or state government sponsored maternal care schemes. On the other side it could be the increased levels of knowledge and education of the respondents due to the dynamics of social changes. As observed the present percentage of institutional delivery in Delhi slums has shown much better improvement than the previous findings (58.1%) in 1998-99 and 68.9% in 2005-06 in Delhi as a whole (NFHS, 2005-06). But the institutional delivery rate of present study area has been found similar with study findings (86.1%) by Angadi *et al,* (2013).

Among the institutional deliveries of the present study 64.5% mothers have utilized delivery care services from government hospitals/clinics/nursing homes, and 20.3% from private hospitals/clinics/nursing homes. The delivery in public/govt. institution is found to be similar with finding (62% preferred Government hospital) in the study by Angadi *et al.*(2013). But as per NFHS-3 (2005-06) report,only 33.4% deliveries in the slum of Delhi have been conducted in institutions. In the study of Delhi slums, Agrawal *et al*, (2007) have reported 32% home deliveries.However, for institutional deliveries nothing

much variation has been observed on their economic and educational background, but for home deliveries illiterate mothers have been found more compared to mothers with higher educational levels. Thus, it could be stated that higher the level of education higher the institutional deliveries in both government and private, but lower the level of education higher the home deliveries in the slum areas. It means, higher the level of education has got lower the percentage of home deliveries in the slum of Delhi. The mothers belonging to lower social class have reported a lower institutional delivery. It means lower caste and class residents of slum settings need boost up for institutional deliveries as the women from the lower social status preferred higher percentage of home deliveries in the slum city. Therefore, the specific interventions are needed to reduce home delivery and to increase institutional delivery among the illiterate mothers residing in the slum areas.There is no significant variation found in the utilization of institutional delivery facilities among the income groups. The respondents working in the private sector have shown higher utilization of public health institutions for the delivery of a child compared to other occupational groups.

Conclusion

- In conclusion it could be stated that the women living in the slum situation are well known about the reasons of institutional delivery. Apart from cultural beliefs and faiths more than three fourth mothers have gone institutional deliveries. Only 15.1% mothers have preferred home delivery assisted by trained health workers. But there is no significant variation in the utilization of intuitional delivery facilities among the income groups. Preference for institutional delivery varies with the level education of the mothers. The percentage of institutional delivery has been observed relatively higher among the mothers who belong to higher education group than those illiterate mothers. It means higher the level of education lower the percentage of home deliveries in the slum of Delhi. Mothers belonging to lower social class have reported a lower percentage of institutional delivery. But the women from the lower social status have preferred higher percentage of home deliveries in the slums.
- For the deliveries most mothers have utilized delivery care services from government health facilities and only fewer mothers have utilized the same from private health facilities. The institutional deliveries have been increasing in the slums irrespective of their economic and other backgrounds, but for home deliveries illiterate mothers are more than mothers from other educational levels. It implies higher the level of education, higher the institutional deliveries in both government and private health facilities.
- However, for addressing shortfalls of cent percent institutional delivery in the urban setting, the local authority should be more focused.
- There should a strategic plan of action for strengthening institutional delivery among the illiterate mother and lower cast groups leaving in the urban slum of Delhi.
- Timing and distance factor of the pregnant mothers leaving in the slum areas should be taken into consideration while they are approaching to health facility institution for ANC and finally for delivery.

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