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Impact of Education on Reproductive Health among Women Residing in Slums of Varanasi City, Uttar Pradesh

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ABSTRACT The present investigation was done to study the impact of education on reproductive health among women residing in slums of Varanasi district. Multistage stratified random sampling technique was used to select the sample (n= 500). A self-structured and pre-tested interview schedule was used to collect the responses of mothers related to their reproductive health. Selected women were interviewed by personal visit. The result shows highly significant correlations (P<0.001) between educational qualification of mothers and number of living children. Educated mothers have better reproductive health in comparison with illiterate mothers. Hence priority should be given by government for education of girls and women as educational opportunities affect their status as they havemore control over their own lives, health and fertility.

INTRODUCTION

Reproductive health is a key facet of human development. Globally, more than 350,000 women die each year because of pregnancy and childbirth complications, 99 percent of them in developing countries. Thirty-five poor countries, mainly in Sub-Saharan Africa, have the world's highest birth rates (more than five children per mother). Many poor women turn to abortion as a last resort means of birth control. Some 68, 000 women die each year from unsafe abortions, while another 5.3 million suffer from temporary or permanent disability (World Bank 2010).

The reproductive health refers to the process in which reproduction is accomplished in a state of complete physical, mental and social wellbeing, not merely the absence of disease. World Health Organization (WHO 1994a) defines health as a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity, reproductive health addresses the reproductive processes, functions and system at all stages of life. Reproductive health, therefore, implies that people are able to have a responsible, satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so.

"A reproductive health approach also means that, couples are able to have sexual relationship, free from the fear of unwanted pregnancy and from contracting any of the diseases, people have the ability to reproduce and regulate their fertility, women are able to go through pregnancy and child birth safely, the outcome of pregnancy is successful in terms of maternal and infant survival and their well-being" (Fathalla 1988).

Many studies have demonstrated that poor reproductive health outcomes of early pregnancies, and poorly managed obstetric complications adversely affect the opportunities for poor women and their families to escape poverty (Greene and Merrick 2005). Overall reproductive health –related mortality and morbidity account for almost a third of global burden of diseases among women of reproductive age and fifth of the burden of disease among the world's population overall (Singh et al. 2004). In India, there has been an alarming increase in the slum population mostly due to migration of the rural poor. It has been reported that total slum population in India has doubled in the past two decades and has risen from 27.9 million in 1981 to 42.6 million in 2001. According to the 2001 census, 640 cities and towns in India reported slums and the total slum population comprised 22.58% of

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the total urban population of the states/union territories reporting slums (Census of India 2001).

Ministry of Housing and Urban Poverty Alleviation National Building Organization, GOI (2008) in their report defined slum "as a compact settlement of at least 20 households with a collection of poorly built tenements, mostly of temporary nature, crowded together usually with inadequate sanitary and drinking water facilities in unhygienic condition."

In general, women in the slum remain unaware of their own reproductive health problems occurring during pregnancy such as danger signs for pregnancy, excessive bleeding, anaemia, diet care during pregnancy and blood pressure checks-ups etc. Further risks involved in repeated postnatal care are another concern. Hence it is necessary to impart knowledge about pregnancy related problems and to understand the root cause of generating complications during delivery among such poor women in slums.

The objective of this study is to examine the reproductive health and factors affecting the status of women residing in slums areas.

METHODOLOGY

Universe of the Study

The universe of the study was slum areas of Varanasi, the holy city of India; it is also known by the name of Kashi and Banaras. Varanasi is situated on the bank of river Ganga, which is believed to have the power of washing away all of one's sin.

Research Design and Sampling

Multistage stratified random sampling techniques was used to select the sample out of 225 Malin Basti (Slum areas) 10 slum areas were selected randomly namely Adityanagar, Bankati, Bhogabeer, Nagwan, Chhittupur, Sigra, Khojawan, Shiwala, Sunderpur and Karaundi. Since the socioeconomic background of slums was relatively homogenous therefore given equal importance to all ten slums. Total 500 households, that is, 50 households from each slum were selected looking to the fact that all the castes and classes are represented in the study. For this purpose before selecting the sampled households, census techniques were followed and basic information from all the households regarding their caste and class background was taken. The data was collected from April 2011 to December 2011.

Tools of the Study

A pre-structured and pre-tested interview schedule was used for data collection, keeping the objectives of the study in the mind. The schedule was constructed with the help of following variables as age, sex, occupation, caste, level of education.

Research Fellow visited mothers at their home in selected slums with the schedule for collection of information. Information's were collected by asking questions after rapport building and if there was any confusion to respondents Project Fellow explained the questions.

Data Analysis

Obtained responses were coded, tabulated and then percentages were drawn and content analysis was done and data was converted into coded form and transferred on to computer software (Excel). The analysis had been done with SPSS 16.0 v/s. The data has been presented in form of percentage for qualitative variables. The qualitative variables have been presented in the form of mean and standard deviation. The chi-square test has been used to test the significance of difference in different variables of the study.

RESULTS

In this study 500 women were interviewed. It was found that 56.4 % of women belonged to age group 25-34 and the mean age of respondents was 29.44+ 6.20 year. The socio-demographic characteristics of the slum population are shown in Table 1.These women had lower level of education as 51.6% of women were illiterate , 34.6% were educated up to the junior high-school level, followed by 9.8% high school, 3.0% were having education up to intermediate and only 1.0% women were having either undergraduate or postgraduate level education. Respondents living in slum majority (78.2%) of them belonged to Schedule Caste. It was found that 63.4% respondents families having Monthly Per Capita Income below or up to Rs. 600. In this

study it was found that 62.0% of respondents were married before reaching the age of 18 while rest 38.0% got married at 18 year and above. Minimum age of marriage was found 11 years and maximum was 26 years. Mean age of marriage of respondents was 16.44 year. It was also found that, out of 500 respondents 44.8% women having at least 2 children while rest 55.2% were having 3 or more than 3 children.

Majority (95.0%) of respondents had the knowledge about family planning methods, only 5.0% had no knowledge. It was also observed on the basis of their educational status. 95.3% illiterate had the knowledge of family planning method while very less 4.7% uneducated respondents did not have the knowledge of family planning methods. Out of 475 respondents who were aware regarding family measures, more than one-third (41.7%) were not using any method of family planning followed by 32.6% adopted tubectomy, 14.1% were taking oral pills and only 4.0% were using copper-T as family planning measures (Table 2).

Table 1: Distribution of respondent's on the basis of their socio-demographic characteristics

Characteristics	*N*	*%*	*Mean ± SD*
Age Respondents (Years)			
< 25	105	21.0	29.44 ± 6.20
25 - 34	282	56.4	
≥ 35	113	22.6	
Education of Respondents			
Illiterate	258	51.6	
Primary-junior high school	173	34.6	
High school	49	9.8	
Intermediate	15	3.0	
Under Graduate (U.G.)	4	0.8	
Post Graduate (P.G.)	1	0.2	
Caste of Respondents			
SC	391	78.2	
OBC	61	12.2	
General	02	0.4	
Muslim	46	9.4	
Type of Family			
Nuclear	325	65.0	
Joint	175	35.0	
Monthly Per Capita Income			
≤ 600	317	63.4	Rs.598.38± 357.60
601-900	103	20.6	
≥ 900	80	16.0	
Age of Marriage			
Up to 14	118	23.6	16.44 ± 2.17,
15-17	192	38.4	Range = (11 - 26)
≥ 18	190	8.4	
No. of Children			
0*	3	0.6	2.77 ± 1.25
1	72	14.4	
2	149	29.8	
>3	276	55.2	

*3 mother were pregnant for the first time

It was found that education among mothers increases awareness level that results in higher percentage of T.T. vaccination during their pregnancy. Among mothers who were educated up to High school or above. Out of total respondents 85.8% had taken T.T. vaccination while 14.2% had not taken. When we look education-wise acceptance of T.T. vaccination, 81.0% illiterate mothers had taken T.T. vaccination while 19.0% did not have. Mothers who were educated up to primary to middle high school (N=178), Majority 89.0% had taken T.T. vaccination. Respondents educated up to high school or above, of them 95.7% had taken T.T. vaccination while only 4.3% did not have (Table 3).

Place of delivery is categorized as delivery at home by trained *dais*, delivery at home by other women (neighbourhood) and hospital (or clinic) delivery. Out of 258 illiterate mothers 47.3% had their delivery at home by trained personnel/ *dais*, 44.2% in hospital and minimum 8.5% at home by other women. Women educated up to primary -middle percentage of hospital delivery was more in comparison with illiterate women. Moderate significant co-relation ($P < 0.01$) between place of delivery an education of mother were found (Table 4).

Data regarding birth interval between last two children showed that out of 425 respondents, 91.1% respondents were having birth space less than 3 year and only 8.9 % respondents having their second child after 3 years of spacing. It reveals that 46.8% urban slum women had 1-2 year gap between their two children. This shows that women are unaware about the benefits of the family planning programs (Table 5).

In this study it was found highly significant correlation ($P< 0.001$) between educational qualification of mothers and number of living children. Out of 500 mothers 258 were illiterate, mean number of children illiterate women have 3.08.Out of 500 mothers 173 were educated up to primary-middle. Mean number of living children were 2.53. Out of 500 mothers 69 were having education up to high school or above. Mean number of children among these mothers were 2.19 (Table 6).

Table 2: Distribution of respondents according to knowledge about family planning method on the basis of their educational qualification (n=500)

S. No.	Education of mothers	Knowledge of FPM					
		Yes		No		Total	
		Frequency	%	Frequency	%	Frequency	%
1.	Illiterate	246	95.3	12	4.7	258	100.0
2.	Primary-middle	161	93.1	12	6.9	173	100.0
3.	High school +	68	98.6	01	1.4	69	100.0
	Total	475	95.0	25	5.0	500	100.0

$\chi^2 = 3.26$, df = 2, P > 0.05

Table 3: Education-wise distribution of respondents according T.T. vaccination taken during their pregnancy

S.No.	Education of mother	T.T. vaccination					
		Yes		No		Total	
		Frequency	%	Frequency	%	Frequency	%
1.	Illiterate	209	81.0	49	19.0	258	100.0
2.	Primary-Middle	154	89.0	19	11.0	173	100.0
3.	High school+	66	95.7	03	4.3	69	100.0
	Total	429	85.8	71	14.2	500	100.0

$\chi^2 = 11.83$, df = 2, P < 0.01

DISCUSSION

Slum areas are overcrowded and lacking basic civic amenities like clean drinking water, sanitation and health facilities. Housing is the fundamental concern to family health, housing condition was poor due to low income status, poor ventilation and lack of sunlight inside the house. Garbage and water disposal practices were not hygienic due to lack of proper drainage system. Majority of respondents disposed water in open area. Majority of respondents depend on public tap for water. Per Capita Monthly Income is total gross earning of family members in the household and are divided by the number of family members living in the household. Mean Monthly Per Capita Income was Rs.598.38. Majority of respondents having at least one earning member in their family, followed by 28.0% having 2 earning members and 4.0% were having 3 earning members in their family while only 0.4% families having 4 earning members in their family. Earning members were engaged in different kind of occupations, that is, daily wager, peon, labourer, retired person, sweeper, *rickshaw* puller, vendor, some of them were in pri-

Table 4: Education-wise distribution of respondents according to their place of delivery

S.No.	Place of delivery	Education of mother							
		Illiterate		Pri-middle		Hs +		Total	
		Frequency	%	Frequency	%	Frequency	%	Frequency	%
1.	At home by trained *dai*	122	47.3	55	31.8	22	31.9	199	39.8
2.	At home by other women	22	8.5	17	9.8	2	2.9	41	8.2
3.	Hospital clinic	114	44.2	101	58.4	45	65.2	260	52.0
		258	100.0	173	100.0	69	100.0	500	100.0

$\chi^2 = 17.17$, df = 4, P < 0.01

Table 5: Distribution of respondents according to birth interval between last two children (n=425)

S. No.	Interval between last two children	Frequency	%
1.	Up to 1 year	36	8.5
2.	1 - 2 year	199	46.8
3.	2 - 3 year	152	35.8
4.	> 3 year	38	8.9
Total		425*	100.0

Mean ± SD = 2.49 ± 0.94, Range (1- 7)
*Out of 500 respondents mothers 72 were having only 1 child and 3 mothers were pregnant for the first time

vate job only few of them were teachers. Majority of them have no future security. They earn daily and spend it to fulfill their basic needs. An earlier study based on Kolhapur slum reveals that income is an outcome of type of occupation and individual's education. Slum is an unhygienic place for human settlements. Due to poverty economic status is lower , so education level is low ,unskilled or low skills, so the socio-economic status of slum dwellers is low (Pawar and Mane 2013).

There are various factors which influenced the women's reproductive health, these are age at marriage, space between two child, use of contraceptives, family size, level of education of parents, customs and beliefs, role of women in society. A well-planned family is the base for a planned development and richness of the society and country. Out of 500 respondents majority respondents 95.0% had the knowledge about family planning method while rests were not. Population of India has been growing at a very rapid rate; family planning is a key point for planned development.

The minimum legal age for marriage in India is 21 year for boys and 18 year for girls. Out of 500 respondents only 38.0% got married at 18 years and above while rest were got married before completing their 18 year of age. Minimum age for marriage was 11 year and maximum was 26 years. Early marriage and child bearing heighten the risk for both mother and babies. According to UNICEFs estimate 34 million South Asian women aged 20-24 were married or in union before the age of 18 in 2009 (UNICEF 2011). In India, the persistence of early marriage reinforces women's low status and social isolation, and such marriages almost always force girls to prematurely and their education to assume household responsibilities. Consequently, early marriages reduces women's employment prospects as well. Marriage also usually leads directly to childbearing, given pressure, largely exerted by mother-in-law through their sons, for young bride to have a baby relatively quickly (Barua and Kurz 2008).

Table 6: Distribution of respondents according to their educational qualification and number of living children

S. No.	Education	Frequency	Mean	S.D.
1.	Illiterate	258	3.08	1.33
2.	Primary-Middle	173	2.53	1.06
3.	High school +	69	2.19	1.01
	Total	500	2.77	1.25

f = 20.16, P < 0.001

The results of this study clearly indicate that awareness about contraceptives is not sufficient for its actual use in the slums as when respondents were asked about their opinion regarding use of family planning methods in case it is provided free of cost.50.4% (N =252) were agree to accept while 18.6% denied for the same and rest 31.0% were tubectomized earlier. Converting knowledge into practices is the real challenge as far as family planning is concerned. A study by Ghosh et al. (2013) reveals that only 9% women had no idea about contraception. Oral contraceptive pills (52.6%) were the most commonly used contraceptive followed by condom (24.6%). Common reason for not using any method was desire of a child, amenorrhea since last delivery (26.1%) and lack of motivation (20.2%). Most of the non-users were below 30 years, that is, females at the peak their reproductive period. In nut-shell there is a huge knowledge- practice gap.

The information obtained in the present study showed that there was 14.2% mothers did not take any T.T. vaccination during pregnancy. A community based cross-sectional study in urban slum by Kumar et al. (2008) reveals that low levels of awareness and practice of T.T. immunization(74.2% awareness, 58.1% practice), trained birth attendant (69.6% awareness ,39.1% practice) and post natal care (75.4% awareness, 51.0 % practice) among lactating mothers.

From nearly 50 years, Pathfinder International has been leader in bringing reproductive health and family planning to poor and undeserved

communities around the world. Pathfinder believes that reproductive health is a basic human right. It has been working in India since1999 and works to promote knowledge and understanding about the danger of adolescent child birth, the personal health benefits of delaying the first birth until women reaches age 21 and subsequent spacing between two children at least 3 years. The results of the present study showed that out of 500 respondents 425 respondents having at least 2 children and among 75 respondents: 72 respondents had only one child and 3 mothers were pregnant for the first time. Out of 425 respondents 46.8 % (N=199) were having 1-2 year spacing between two children. This shows that women are unaware about the benefits of family planning programmes. Educational status of mothers also affects the acceptance of family planning. Significant correlation ($P<0.001$) was found between educational qualification of mothers and number of living children. Study by Nimbalkar et al. (2013) reveals that most mothers from slums were illiterate (44.2%) whereas 83.7% mothers from villages had at least primary education. Healthcare utilization, antenatal care, hospital delivery, neonatal follow-up. Health seeking behavior was better in village participants in comparison to slums.

There was lack of awareness in above described aspects. Mothers who were found worst in knowledge selected to educate in particular aspects. It was also found that awareness level and child rearing practices was better among educated mothers in comparison to illiterate mothers. Hence educational material was prepared to educate mothers. Mothers were educated with the help of booklet and discussion method. Significant changes were observed in their practices after educating them. Mothers were also educated about benefits of family planning methods; birth spacing and small families, improvements in awareness were found.

CONCLUSION

Poor health of women residing in slum is a concern of both national and individual levels. The consequences of women's unfavorable in India include discrimination in allocation of household resources, such as food access health care and education as well as marriage at young age. Due to poverty and illiteracy, the knowledge factor of the Indian women regarding reproductive health and reproductive right is pathetic. Effective education to mothers can increase their awareness level for better living of family and community hence priority should be given by government for education, not only for children as well as for parents in health hygiene, immunization, family planning , etc. through different programmes and non-governmental organization.

RECOMMENDATIONS

Women's economic empowerment is big part of the fight against poverty, and better reproductive health affords, women and their families a better chance to achieve that healthy mothers can take better care of themselves and their children and invest in their well-being, and help them to become more reproductive member of society as adults. Gender equality and women's empowerment are important for improving reproductive health. There is also an utmost need to understand gaps in knowledge regarding the levels, the determinants and consequences of women's reproductive health problems and translate the concepts into policies and programmes so as to design appropriate and locally relevant interventions for improving women's reproductive as well as overall health.

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