Original Article

SOCIAL HEALTH AND NUTRITIONAL STATUS OF WOMEN RESIDING IN URBAN SLUM CLUSTERS OF WEST DELHI

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ABSTRACT

Urban poor women residing in slum clusters are susceptible and trapped in the cycle of disease and illness primarily due to their nutritional status being affected by unequal access to food, health care and heavy work demands. The present study was conducted to understand the factors related to social health and nutritional status of women through questionnaire, anthropometric measurements and dietary intake in the targeted area. The study comprised of community based cross-sectional study in 12 urban slum clusters of West Delhi. 2,088 women (18-49 years) were selected by quota random sampling. Results indicated that of total respondents 69.2% were literate with 49.8% married before 18 years, 44.3% had a child before 20 years of age, 13.2% and 22.4% reported of abortions and domestic violence.9.9 % also reported of substance abuse of which 56 % were either pregnant or lactating. Average energy and protein intake per day was 1242±346 Kcal and 35.4±8.1g respectively. Study also reported that of 323 pregnant women 52.3% were receiving antenatal care. Only 47.2% of lactating women were exclusively breastfeeding their children for first 6 months whereas 30.2% of infants had received pre-lacteals as their first feed after birth. The composition of the urban poor in Delhi is different with each cluster varying in their own culture and beliefs. The undertaken study revealed that the lower health and nutrtional status of women in the urban slum clusters is largely due to lack of awarenes and knowledge regarding facilities available.

Key Words: Social health; nutritional status; substance abuse; feeding practices; antenatal care

INTRODUCTION

Urban poor is a rapidly increasing segment of India's population: With more than 90 million people living in urban poor settlements, the rate of urban poverty in India is staggering. An analysis of population growth trends between 1991 and 2001, revealed that while India grew at an average annual growth rate of 2%, urban India grew at 3%, mega cities at 4% and slum populations rose by 5 to 6%. These numbers are expected to rise and in next 25 years the number of urban poor could end up in excess of 200 million [1].

Overall, socioeconomic and health conditions tend to be better in urban areas than in rural areas. The urban population also has access to a wider range of health care options, particularly in large cities, due to the better-developed health infrastructure. The cities open many possibilities for women to meet, work and form social support networks [2]. However; studies have revealed that women living in cities also face unique challenges such as heightened risk of physical, sexual and psychological violence; barriers in accessing health and social services due to lack of control over family financial resources, child-care responsibilities, restricted mobility and limited decision-making power; and lack of education and economic security relative to men.

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The present study was conducted to understand the social health and nutritional status of the urban poor women (18-49yrs) residing in the resettlement colonies through the social determinants of health namely, education and literacy, employment, age at marriage, abortion, birth control measures, substance abuse, domestic violence practices, access to health services available, awareness during period of pregnancy, lactation and nutritional status of the women.

The study was undertaken with following objectives:

1.To study social factors related to the health of women in the target areas.

2.To assess the nutritional status of women through anthropometric measurements and dietary habits.

MATERIALS AND METHODS

The study was a community based cross sectional study conducted in 12 slum clusters of West Delhi, where Gender Resource Center (GRC) of Swami Sivananda Memorial Institute (SSMI) was functional. The time period of the study was May 2011 January 2012. A sample of 2,088 women (in the reproductive age group, 18-49 years) was selected from the 12 clusters using random quota sampling technique. The women in the reproductive age group (18-49 years) who provided written informed consent were enrolled for the study. A pre-designed, pre-tested, and structured questionnaire was used to collect the information from the respondents. Anonymity of responses was guaranteed to the respondent.

Information regarding demographic profile (present age, religion, education, family structure, and occupational profile) age at marriage, age when first child was born, abortions, use of birth control measures, substance abuse, domestic violence was collected. The nutritional status was determined by anthropometric measures-height and weight, dietary intake, dietary habits and food consumption pattern. Ideally 24 hour dietary recall should be done for 2 working days and 1 holiday, due to lack of resources it was done for 1 working day and 1 holiday. Food frequency questionnaire was used to interpret food consumption pattern.

Obtained data was analyzed using SPSS version 16.0 software.

RESULTS

A total of 2,088 married women (18-49 years) were randomly selected for the study. Of these women 1,179 women were Non pregnant Non lactating (NPNL), 323 were pregnant and 586 were lactating. Table 1 depicts the demographic characteristics of the respondents. The age wise distribution of the subjects indicated that majority (41.5%) were in the age group of 21-30 years while 31-40 years was also well represented through higher percentage of 37%. 30.8% women were illiterate, 62.6% were living in joint family with an average family size of 5.62.Information on economic status was not fully revealed by the respondents therefore income variable was dropped from the final analysis. The present study revealed a much lower percentage of women (21.8%) belonging to the working category compared to the findings in NFHS-3 wherein forty-three percent of women age 15-49 are employed, with 87 percent of men in the same age group. According to The Lancet, at least 44% of Indian girls and boys are still married off before they reach the legally stipulated minimum age of 18 and 21 years, respectively, and most become parents soon after. The National Family Health Survey of 2005-2006 (NFHS-3) carried out in twenty-nine states confirmed that 45% of women currently aged 20-24 years were married before the age of eighteen years, with 58.5% in rural areas and 27.9% in urban areas.

In the present study, 49.8% of women reported marriage before the age of 18.The early age for marriage was more influenced by the customs and rituals followed back in the villages of Rajasthan and Madhya Pradesh. No significant relationship (r=0.182) was found between education and age of marriage however, a moderate positive correlation (r=0.366) was found between the women's education above class 10^{th} and age of marriage. On the other hand, lesser percentage of early marriages were reported in women residing in slums of Peeragarhi and Multan Nagar (native of

Table 1: Demographic profile of all the respondents

S.No	Characteristics	No. of subjects (N=2,088)
1.	Age of respondent (in years)	
	18-20	235 (11.2)
	21-30	866 (41.5)
	31-40	773 (37.0)
	41-49	214 (10.3)
2.	Education	
	illiterate	644 (30.8)
	<class10	884 (42.4)
	>class 10	560 (26.8)
3.	Religion	
	Hindu	1526 (73.08)
	Muslim	324 (15.52)
	Sikhs	188 (9.0)
	christens	50 (2.39)
4.	Type of Family	
	Nuclear	781 (37.4)
	Joint	1305 (62.6)
5.	Average family size	5.42
6.	Working women	456 (21.8)
	Non working	1632 (78.2)
7.	Age of marriage	
	<18 years	1041 (49.8)
8.	Age of first child	
	<20	925 (44.3)

Figure in parenthesis includes percentage

Table 2: Distribution of respondents (N=2,088) based on abortions, taking any type of birth control measures, substance abuse and domestic violence

Parameter	no. of respondents in different age groups(yrs)				Total
	18-20	21-30	31-40	41-49	(N=2,088)
Abortions*	31(13.2)	173(20)	68 (8.8)	3(1.4)	275 (13.2)
Aborted after 20 weeks of conception	3(1.3)	22(2.5)	26(3.4)	1(0.5)	52(2.49)
Aborted below 12 weeks of conception	27(11.5)	84(9.7)	38(4.9)	2(1)	151(7.23)
Taking birth control measures	86(36.6)	423(48.8)	204(26.4)	97(45.3)	810 (38.8)
Substance abuse	5(2.1)	103(11.9)	96(12.4)	4(1.9)	208 (9.9)
Domestic Violence	37(15.7)	269(31.1)	108(13.9)	54(25.2)	468 (22.4)

Figure in parenthesis includes percentage
* 72 women out of 275 had no idea about the time of abortion

villages located in Punjab) compared to other slums migrants from Rajasthan and Madhya Pradesh.

Prevalence of abortion among subjects was also reported. Out of 13.2% of women reporting of abortions, 18.9% had abortions in more than 20 weeks of pregnancy and 54.9% in less than 12 weeks of pregnancy. Maximum abortions (64%) were reported in women of age group 21-30 years whereas 11% abortions were also reported in women (18-20 years).About 38.8% were using birth control measures however, the information on type of birth control measures being used was not provided by the respondents. Substance abuse of any form (alcohol, chewing tobacco, and smoking) was reported by 9.9% of the subjects. Prevalence of domestic abuse and violence was reported by 22.4% (Table 2).

Table 3 depicts nutritional status of the subjects where in average BMI was found to be 21.51 ±1.5 Kg/m². Overall mean energy and protein intake was 1242±346 Kcal and 35.4±8.1g respectively. Nutrition Adequacy Ratio (NAR) of protein and energy was found to be 0.64 and 0.65 respectively. Hence, energy and protein requirements were not

Table 3: Distribution of Subjects (N=2,088) based on Nutritional status: Anthropometric Measures and dietary intake

		Anthropometric indices			Dietary Intakes	
Area (cluster)	Number of subjects	Height (cm)	Weight (kg)	BMI	Energy(Kcal)	Protein(g)
Peeragarhi	235	149.54	52.3	23.04	1306±375	32.3
Rajiv Gandhi	32	149.43	44.6	20.1	1329±485	40.5
Bhagat Singh	63	143.4	46.8	20.95	1218±260	36.9
Dairy wala	84	150	42	18.67	1105±288	32.3
Deen Dayal	45	146	50	23.13	1347±336	39.8
Soniya camp	130	147.6	48.2	22.01	1280±315	36.9
Madipur	749	148	50.7	22.6	1366±322	35
Meerabagh	489	147	47	22	1057±332	32.3
BG-7	54	149	49	21.89	1310±330	33.8
Sewa Basti	102	149	44.1	19.1	1237±401	36.2
Mahatma Gandhi	84	144.6	46.1	21.93	1143±291	33.6
Multan Nagar	21	147.7	49.32	22.7	1210±388	35.5
Mean		147.6±2.0	47.5±2.9	21.5 ±1.5	1242±346	35.4±8.1

Table 4: Average intake of food from different food groups by the subjects (N=2,088)

S.No.	Food groups	Average intake per day
1	Cereals(g)	241.6
2	Milk(mL)	97.3
3	Pulses(g)	20.2
4	Vegetables(g)	116.2
5	Sugar(g)	9.5
6	Fat(g)	25.8

Table 5: Health care services availed during pregnancy and infant feeding practices followed during lactation

S.No.	Services/ Practices	Total
1.	Services availed during pregnancy	323
	ANC care	
	Visit to doctor (at least 3times)	
	private doctor for ANC	85 (26.3)
	PHC for ANC	84 (26.1)
	Not visiting doctor	154 (47.7)
	Consuming of Iron Folic acid supplementation	144 (44.6)
	regularly(for 100 days)	
	Immunization with Tetanus Toxoid (2 times)	133 (41.2)
2.	Feeding practices followed during lactation	586
	Exclusively breastfed for 0-5 months	277 (47.2)
	Initiation of breastfeeding	
	within 1 hour of birth	299 (51.0)
	after few hours	137 (23.4)
	within 1 day	82 (13.9)
	within 2-3days	68 (11.6)
	First food other than breast milk	177 (30.2)

Figure in parenthesis includes percentage

DISCUSSION

The study conducted in 12 urban slum clusters revealed that the literacy rate was higher than that of NFHS 3 data wherein 48 % of urban poor women were found to be illiterate compared to the 30.8% revealed in the present study [3].The study also reported that 49.8% women got married in age less than 18 years leading to early deliveries, multiple pregnancies and abortions. The prevalence of social health determinants as early marriage, multiple pregnancies and abortions, substance abuse, domestic violence indicated lower access to services available.

As per WHO, about 5.7% of maternal deaths in Asia occur due to unsafe abortion [5]. The present study also revealed a higher rate of abortions (13.2%) among women which may be largely due to lower awareness of birth control measures (as only 38.8% reported to be using them). This percentage of women using the birth control measures was similar to findings reported in "The state of Urban Health in Delhi" with about one-third (34.8%) of urban poor women practicing any modern contraceptive method in comparison to urban average of 64% [6].

Substance abuse of any form was reported by 9.9% of the subjects with maximum substance abuse in Rajiv Gandhi cluster (28.1%). In Urban areas 15.8% of the women in age of 15 years and above use tobacco [7]. The prevalence of domestic violence among the women was found to be 22.2% in study area. The results were found to be consistent with study done in West Bengal among poor who reported 23.4 % domestic violence [8].

The study revealed an average energy and protein intake of1242±346 Kcal and35.4±8.1grespectively by subjects which was much lower than the recommended dietary allowance (RDA) for sedentary women (Table 3). BMI is being increasingly used as a measure of nutritional adequacy in adults, and is considered to be a better indicator of chronic energy deficiency. Mean BMI among the subjects was found to be 21.5 ±1.5 Kg/m². Though the normal mean BMI could be attributed to the representation of pooled data of pregnant, lactating and non-pregnant non- lactating women, however within the population there are vulnerable groups who are more marginalized than the others. As per NFHS-3 data 36% of women are below the BMI cut off point of 18.5. In the study group of 2088 women 13.9% of women were found to be having BMI less than 18.5

As per NFHS 3 data for urban poor 44.7% of the infants were exclusively breastfed [3]. The study data in 12 urban slum presented similar results with 47.2% of infants being exclusively breastfed for first six months. Also, the prevalence of infants being breastfed within an hour of birth was only 51% revealing a lower awareness level among the study group.44.3percent of lactating women were feeding their child some other food besides milk such as tea, saunf ka paani, sugar water and water to the child in the first 6 months.

The findings of the study reaffirms that, though there are various policies and programmes addressing the concerns of the urban poor, their impact on the lives of the urban poor has been limited. This is entirely due to the non-effective delivery mechanism calling for greater public vigilance. There is a strong need to strengthen community networks such as self-help groups and women's health groups and their linkages with health providers. Such groups can generate awareness, increase demand and negotiate for better services.

ACKNOWLEDGEMENT

Authors are thankful to SSMI team for collection of data. Special thanks to Mr. Deepak Sharma for supporting data compilation and analysis. We value the efforts of SSMI GRC project colleagues at

various stages in the preparation of this report. We express our thanks to Mr. Ashok Rao and Mrs Sunita Bhasin for their constant support in conduct of study, meticulous review and suggestions.

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