Research Paper

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Health and Personal Hygiene, Food Consumption Pattern and BMI (Body Mass Index) of Slum Dwellers

Environmental Science

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ABSTRACT

The study was conducted to analyze Health and Personal Hygiene, Food Consumption Pattern and BMI (Body Mass Index) among slum dwellers of Transport Nagar, Narwal, Jammu (J&K). The dwellers were in the favour of ban on marriage at an early age but in real scenario most of them got married in that age. Domiciliary deliveries were preferred and carried out under the guidance of untrained workers. Awareness about the antenatal and post natal care was negligible among the slum dwellers and the immunization status of the children was also very low. Unhealthy habits such as alcohol consumption, smoking and tobacco chewing also prevailed in majority of the individuals. Due to lack of purchasing power, the food consumed by the slum dwellers was unhealthy and unbalanced. Items like milk, fruit and egg were almost absent from their diet, which resulted in malnutrition among them. 52.21% of the respondents were having normal weight (BMI=18.5-25), 39.83% were underweight (BMI=16-18.5) and 7.96% belonged to severely underweight group (BMI<16).

INRTODUCTION

It is estimated that more than one billion people around the world live in slums. Most of them have never tasted fresh water and many suffered from starvation and diseases, such as Malaria, Typhoid, AIDS etc. Slum dwellers not only live in misery, but their plight often goes unnoticed as the traditional focus tends to be on rural population living in developing countries. By 2030, the world's slums population could rise to two billion if no action is taken (Carrie, 2009). Urbanization accompanied by sustained population growth due to large scale migration from rural area to urban center leads to mushrooming slum settlements in all cities and towns in India. An estimated 25% of urban population (810 lacs in 2001) still subsists on income that is below poverty line. The estimation of the state wise slum population based on the combination of data from Census 2001 and Statistical technique shows that the slum population of India will increase from 93.05 million in 2011 to 104.66 million in 2017 (Report of the Committee on Slum Statistic/Census, 2010). Slums present the worst form of health conditions. Their deplorable environmental and economic conditions result in malnutrition among children. Infant as well as maternal mortality rates are very high in the slums. Living in a degraded environment contributes to a general increase in ill health, rather than merely a rise in the incidence of specific diseases.

Review of Literature – The literature regarding the subject matter of poverty and development is widely available. However, attempts made by different workers do not encompass aspect of Health and Personal Hygiene, Food Consumption Pattern and BMI (Body Mass Index) among slum dwellers, except by the few workers e.g. Singh and Rehman (2001), Karan and Harada (2003), Mishra *et al.* (2003), Sundari (2003), Gupta *et al.* (2007), Sarode (2007), Kumar and Sinha, (2008), Akther (2010).

STUDY AREA AND MEHODOLOGY

The present study area is a slum located at Transport Nagar area of Jammu city. Jammu is the winter capital of the state of Jammu and Kashmir. The data regarding health and personal hygiene, and Food Consumption Pattern was collected on the questionnaire based survey, whereas to determine the health status of the slum dwellers the BMI (Body Mass Index) value was calculated. A weighing machine and measuring tape were used for measuring the weight and height of the slum dwellers. According to the BMI value, the slum dwellers were categorized in different weight categories. The formula used for calculating BMI value is as under (Hewitt *et al.*, 2006).

$$\text{BMI (kg m}^{-2}) = \frac{\text{Weight of the respondents in kilograms}}{\text{Height in meters square}}$$

RESULTS AND DISCUSION

Health and hygiene conditions

The information about health and personal hygiene status was included in this aspect which comprised of age preferred for marriage, information about the institutional preference in case of deliveries, immunization status of children, status of antenatal and postnatal care, knowledge about the balanced diet, food consumption pattern, hygiene status etc. Majority of the male respondents (64%) preferred 18-22 years as the age for marriage, 8% preferred the age above 18 years and only 6% were in the favour of age below 18 years. Most of the respondents (96%) were in the favour that marriage should be banned at early age while 4% rejected the idea. The contribution of media significantly enhanced the awareness level of the slum dwellers. For the purpose of deliveries of pregnant females, 64% preferred home due to financial reasons but 20% preferred the health care institutions for deliveries. All the domiciliary deliveries were conducted under the guidance of untrained worker and this was the major cause for high infant mortality rate among these slum dwellers. The respondents of the study area were not very much particular about the antenatal or postnatal care, 38% respondents were positive about antenatal and postnatal care, 26% disagreed with the idea of antenatal and postnatal care whereas 36% adopted the measures in case of an emergency. Immunization status of the slum dwellers was low as compared to other areas probably due to the fact that the slum area had unique characteristics like floating population, overcrowding, and lack of awareness and health services. Most of the slum dwellers discarded the importance of immunization as they thought that their children were naturally more immune than the others. The results regarding immunization status were surprising as 26% respondents adopted complete immunization. The information about various health related programmes such as Pulse polio campaign etc. in the study area was obtained from television (35%), radio (10%), and newspaper (6%) while door to door campaign was found to be most successful (49%) method. As far as the health status of the slum dwellers of present study area was concerned, 26% slum dwellers have suffered from various health problems during the last one month prior to survey. Out of these 26% respondents, 14% complained about pain in limbs and back, 6% complained about weakness and 6% complained about other problems like, neck pain, fever, headache etc. As far as medical history of the respondents was concerned, about 7% respondents of the study area admitted that they had suffered major health problem in last five years.

Personal hygiene is the first step towards good health and amongst the slum dwellers it was almost absent. Majority of the respondents admitted that they do not wash their hands with soap before taking a meal, only 44% respondents had this habit. 60% respondents used to wash hands with soap after toilet whereas 40% slum dwellers did not adopt this habit. The habit of smoking, tobacco chewing and alcohol consumption commonly prevailed among the slum dwellers. A large proportion of (88%) respondents were indulged in these habits and. Out of 88 respondents tobacco chewing was preferred by 70 respondents (79.54%), 10 (11.36%) respondents preferred smoking whereas 8 (9.09%) respondents were habitual of consuming alcohol.

Due to lack of purchasing power, protein rich food items were almost absent from the diet of slum dwellers. Not only the dietary intake of the male members, but also of the mothers and their children was of sub-standard quality and insufficient. In the study area, 44% of the respondents were not aware about the balanced diet, 32% had sufficient idea about it, whereas 24% had insufficient/ a little bit of knowledge about balanced diet. Out of 32 respondents, 50% respondents felt that their family takes a balanced diet, 43.75% were not satisfied with their dietary intake and 6.25% had no idea whether their dietary intake was sufficient for their health or not.

Food consumption pattern

Consumption pattern of the slum dwellers indicated that rice (100%) was consumed on daily basis by all the respondents, 68% respondents consumed bread (chapatti) 2-3 times in a week, 28% consumed it daily and 4% took bread once in a week in their diet. Vegetables were also not the part of daily food intake of majority of dwellers. 24% respondents took seasonal vegetables daily, 56% took vegetables once in a week and 20% respondents included vegetables in their diet about 2-3 times in a week (Table 1).

Potato constitutes the major dietary intakes of the slum dwellers. 68% of the respondents took it daily. Access to protein rich animal products like milk, eggs and meat is very low among the poor. As far as intake of meat/fish was concerned, majority of dwellers (60%) took it on monthly basis, 26% consumed it occasionally, 8% inhabitants took meat/fish once in a week and 6% had never consumed it. The contribution of eggs was minor in their dietary intake. 52% of the respondents took eggs rarely, 32% respondents took eggs on monthly basis, 10% on weekly bases and 6% respondents have never included egg in their diet. Milk was the most negligible component of their diet. Legumes were consumed once in a week by 82% of the respondents, 2-3 times in a week by 14% slum dwellers and only 4% respondents took legumes daily. Fruits were also neglected as an essential component of diet. Mostly the seasonal and cheaper fruits were preferred. The consumption of animal rich protein was less because they were expensive and slum dwellers could not afford it. Moreover, the food consumed was imbalanced and of sub-standard quality.

Table 1 Food consumption pattern of slum dwellers

	Food consumption pattern (n= 100)					
	Daily	Weekly	Monthly	Special Occasion	Never	2-3 times a week
Rice	100		-	-	-	-
Bread	28	4	-	-	-	68
Vegetable	24	56	-	-	-	20
Potato	68	16	-	-	-	16
Fish/Meat	-	8	60	26	6	-
Egg	-	10	32	52	6	-
Milk	4	-	2	48	46	-
Legumes	4	82	-	-	-	14
Fruits	2	10	8	78	-	2

Health status of slum dwellers

BMI (Body Mass Index) value was computed for adult male and female residents of the study area. The proportion of adult males with normal BMI (18.5-25) level was 49.09%. 43.64% of the males were found to have underweight BMI (16-18.5) and 7.27% males respondents were having severely underweight BMI (<16). In case of female respondents, 55.17% of the respondents had normal weight (BMI= 18.5-25), 36.20% females were in underweight category (BMI= 16-18.5) whereas 8.63% females were severely underweight (BMI<16). No one was found in the

overweight category, both in case of males and females. The observations depicted that in total 50.91% of the males belonged to below normal weight categories while 44.83% females were below normal weight. At the aggregate level (both male and female), 52.21% of the respondents were having normal weight (BMI=18.5-25), 39.83% were underweight (BMI=16-18.5) and 7.96% belonged to severely underweight group (BMI<16) [Table 2]. On the same line, 52.21% proportion of population showed normal BMI value (18.5-25) in the urban slums of various cities of India (Report of urban survey-slum, 1994).

Table 2 Health status of the slum dwellers according to BMI (Body mass index) values

	Severely Underweight	Underweight	Normal
Males (n=110)	8	48	54
Percentage	7.27	43.64	49.09
Females (n=116)	10	42	64
Percentage	8.63	36.2	55.17
Total Percentage (males& females)	7.96	39.83	52.21

CONCLUSION

Living conditions in many slums were worse than those in the poorest rural area of the country. This can be attributed partly to extremely unhygienic, socio-economic and environmental conditions prevailed in the slums. Poverty, unhealthy occupation, polluted water and air, lack of medical facilities, improper nutrition, poor life style, unhealthy habits, excessive physical work and harsh living conditions etc. have a negative effect on the health of the slum dwellers. In almost all urban renewal and improvement campaigns involving slums, the most frequent solution is 'slum clearance' or 'demolition' which comes with the problem of resistance and reluctance of the slum dwellers to comply. From the point of view of humanity, this very idea of ejecting people from a place they call home sounds very barbaric, inhuman and callous, especially when considered against the backdrop of the fact that they are not privileged enough to afford the required type of housing and environment. Multidirectional massive scale efforts are required to be made for the development of slum dwellers along with allocating special funds and by encouraging public-private partnership to make cities environmentally clean and green.

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