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COMMUNITY DIAGNOSIS OF THE HEALTH STATUS OF AN URBAN SLUM IN PATNA

Community Medicine

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ABSTRACT

Slum is the product of modern industrial civilization. One of the distressing manifestations of urbanization is the sporadic growth of slums. It is a social evil which grows along with urbanization.The current study was undertaken to access the health needs of the people residing in urban slum. This population based cross-sectional observational study was done among residents in the slum area of Chitkohra, Patna. A predesigned, pre-tested, semi-structured questionnaire was developed and was used to collect data. Appropriate statistical tests were applied wherever applicable. Overcrowding was present in 36(72%) of houses, 28(56%) houses were pucca and 16(32%) were kutcha. They have poor access to safe water. Calorie intake was deficit in 62% respondents. Slum problems are widespread and multidimensional in nature; therefore they can be solved by comprehensive programmes.

KEYWORDS

Slum, Health needs, Urbanization

INTRODUCTION

Community diagnosis as defined by WHO is, "a quantitative and qualitative description of the health of citizens and the factors which influence their health. It identifies problems, proposes areas for improvement and stimulates action".[1] It helps the authorities to plan and allocate resources for health in their domains of administration from the smallest levels of wards/mohallas/villages to blocks, towns, cities and even states. India is witnessing a rapidly increasing urbanization trend, with rates increasing from 27.81% in 2001 to 31.16% in 2011[2] This rapid urbanization has also led to the increase in a group of people called "Urban poor" dwelling as a community in "Slums".

The Slum Areas (Improvement and Clearance) Act, 1956 defines slum as "area where buildings a) are in any respect unfit for human habitation, b) are by reason of dilapidation, overcrowding, faulty arrangements and design of such buildings, narrowness or faulty arrangements of streets, lack of ventilation, light or sanitation facilities or any combination of these factors are detrimental to safety, health or morale". They are often overcrowded, with many people crammed into very small living spaces. Slums are not a new phenomenon.[3] According to National Sample Survey (NSS) 69th Round on Urban Slum, an estimated total of 33510 slums existed in the urban areas of India of which 13761 were notified and 19749 were not notified and an estimated 8.8 million households lived in these slums[4]. They are characterized by acute over-crowding, insanitary, unhealthy and dehumanizing living conditions. They are subject to insecure land tenure, lack of access to basic minimum civic services such as safe drinking water, sanitation, storm drainage, solid waste management, internal and approach roads, street lighting, education and health care, and poor quality of shelter. Many of these habitations are located in environmentally fragile and dangerous zones prone to landslides, floods and other disasters that make the poor residents highly vulnerable. A significant proportion of the slum dwellers also face social burdens and health problems worse than their non-slum and rural counterparts. Civic bodies do not provide the required municipal services in slums on the plea that these are located on 'illegal' space.

The current study was undertaken to access the health needs of the people residing in urban slum area of Chitkohra, Patna on the request of KOSHISH, a field action project of Tata Institute of Social Sciences, Mumbai.

OBJECTIVES OF THE STUDY

The overall goal of the study was health need assessment of the slum residents and thus, identifying key interventions necessary to this area. The specific objectives of the study were to:

1) To study the socio-demographic characteristics of slum dwellers
2) To know the living conditions and environmental aspects
3) To assess their nutritional status

MATERIALS AND METHODS

Study Design and Participants

This population based cross-sectional observational study was done for obtaining data on the health status of the residents in the slum area of Chitkohra, Patna, Bihar. A visit by team of Undergraduate MBBS students, Interns and Tutors from the Department of Community Medicine, Patna Medical College was made. The team visited the slum area on pre-fixed days to assess their health needs and for health education of the residents of the community.

Sample Size

The slum cluster consisted of about 55 households. It was attempted to sample all HHs and we could sample 50 HHs and one person from each household was selected randomly and was interviewed. Dietary survey was done among 200 dwellers of the 50 families residing in the slum

Data Collection Tool

A pre-designed, pre-tested, semi- structured questionnaire was developed and was used to collect data. It has sections including socio-demographic characteristics of the study subjects, psychological behaviour, environmental sanitation, water quality, waste disposal and dietary assessment. Dietary assessment was done by oral questionnaire (24 hours recall method) and weighment of raw food method. Energy and protein intake was calculated using food composition table given in the "Nutritive value of Indian food stuffs" by Gopalan [5]

Statistical Analysis

The data was entered into MS Excel spread sheet 2007 and further analysed by SPSS 16 version.

RESULTS

TABLE 1 : DEMOGRAPHIC PROFILE OF FAMILIES (N=50)

	Frequency(n=50)	Percent (%)
Social Class		
Upper Middle	11	22.0
Middle	18	36.0
Lower Middle	14	28.0
Lower	7	14.0
Type of House-		
Kutcha	16	32.0
Pucca	28	56.0
Semi-Pucca	5	10.0
No House	1	2.0
Type of Family-		
Nuclear	27	54.0
Joint	23	46.0
Overcrowding-		
Present	36	72.0
Absent	14	28.0
Kitchen-		
Seperate	7	14.0
Not Seperate	19	38.0
Varandah	24	48.0

Mean per capita income	-	2321.26 Rs
Average family Size -		4

Table -1 shows that according to Modified Kuppuswamy Socio-economic status scale, 36% families belong to middle class. Situation of houses were very congested. 56% houses were pucca, 10% were semi-pucca houses and 32% were kutcha houses and one family was without a house. Overcrowding was present in 72% of the houses and in 28% of the houses overcrowding was absent. Ventilation and lighting both were inadequate in the houses. Kitchen – chulha was smoky. No proper storage of food, no water supply in kitchen was found. 48% of the kitchen were situated in the varandah, 14% were situated separately. Mean per capita income of the families was 2321.26 rupees. Average family size was 4.

TABLE 2: LIVING CONDITION AND ENVIRONMENTAL ASPECTS (N=50)

Parameter	No. of Households
1)Source of Drinking Water - Tap/Tube well -Pond/River -Tanker supply	 50(100%) 0(0%) 0(0%)
2)Drainage and Sewerage System -Underground Drainage - Not connected to Sewer	 0(0%) 50(100%)
3)Latrine Facility -Public Latrine -Shared Latrine -Open Defecation	 10(20%) 0(0%) 40(80%)
4)Garbage Disposal -Municipal Staff -No Arrangements	 0(0%) 50(100%)
5)Biological environment -Mosquito breeding site around households -Flies around households -Rodents	 38(76%) 28(56%) 15(30%)

Table- 2 shows that there was poor access to safe and adequate water. All the 50 Households were using Tap water for drinking water. Bathroom was absent and there was no latrine facility. 10 Households were using public latrine and 40 Households were going for open defecation. There was no arrangement for Garbage disposal among all the 50 Households slums.

TABLE 3: DISTRIBUTION OF RESPONDENTS ACCORDING TO CALORIE AND PROTEIN INTAKE (N=200)

Age Group	Calorie intake		Protein Intake	
	Deficit	Excess	Deficit	Excess
<10	15(7.5%)	7(3.5%)	5(2.5%)	17(8.5%)
11 - 20	51(25.5%))	13(6.5%)	28(14.0%))	36(18.0%)
21 - 30	22(11.0%)	19(9.5%)	14(7.0%)	27(13.5%)
31 – 40	16(8.0%)	12(6.0%)	6(3.0%)	22(11.0%)
41 - 50	15(7.5%)	15(7.5%)	7(3.5%)	23(11.5%)
51 - 60	2(1.0%)	7(3.5%)	0(0%)	9(4.5%)
61 - 70	1(0.5%)	1(0.5%)	1(0.5%)	1(0.5%)
71 - 80	1(0.5%)	1(0.5%)	1(0.5%)	1(0.5%)
81 - 90	1(0.5%)	1(0.5%)	0(0%)	2(1.0%)
>90	0(0%)	0(0%)	0(0%)	0(0%)
Total	124(62.0%)	76(38.0%)	62(31.0%)	138(69.0%)

As per table no. 3 it was observed that maximum people were in the age group 11to 20 years (32%) of which 20.5% were females and 11.5% were males, that means most of them were in adolescent age group followed by the age group 21 to 30 years(20.5%). Elderly people above 60 years were only 3% and only 11% were below 10 years of age. 62% of the respondents were having deficient calorie intake daily as compare to their RDA. Deficient calorie intake was highest in the age group 11-20 years (25.5%) followed by 21- 30 years (11.0%). 38% of the respondents were consuming excess calorie as required. 31% of respondents were having less protein intake.

DISCUSSION

A total of 50 households were taken. According to Modified Kuppuswamy Socio-economic Status scale 36% families belong to middle class. Irrespective of all of the head of the families being illiterate and unskilled, they were daily wage earners. 54% belonged to nuclear family. This was almost similar to the findings of Gupta et al, who reported that 57.28% subjects belonged to nuclear families.[6] Calorie intake was deficient in 62% of individuals where as Protein intake was excess Goyle A et al (2004) stated that the mean intake of energy, was below the recommended daily allowances not for the protein for the age group.[7] Situation of houses were very congested and 56% houses were pucca. Bora (2014) also reported that 93.3% slum households owned their houses.[8] Overcrowding was present in 72% of houses. Ventilation and lighting both in the houses were inadequate. There was poor access to safe and adequate water. They preserve water in container not covered properly and children use to take water from the container by their dirty hands. There is lack of personal hygiene. They use to take bath very infrequently. Nationally 74% of the families studied were getting their drinking water by taps, shared with other families.[9]There was no latrine facility. They used to go outside in open field for defecation or in paid toilets for which they were charged 10 to 20 rupees whereas nationally 66% of the slum households were owning latrines.[9] The initiative for building toilets for each household under Swatch Bharat must be promoted to cover the rest of the families in the community. This indicates a better sanitary latrine knowledge and practice among our community, thus indicating the scope for health education and empowerment of the community in other domains. Wastes were disposed on the roads, open field and trenches. Rodents, mosquitoes and flies flourish on this rubbish creating health problems and bad smells.

CONCLUSIONS

The health and livelihood concerns of slum dwellers seem to be diverse yet intertwined; they are faced with poor access to safe and adequate drinking water, and poor sanitary facilities which predisposes them to illnesses. In the event of illness, they have limited access to appropriate health services due to both physical and financial barriers, resulting mainly from limited livelihood opportunities. Slum problems are widespread and multi-dimensional in nature; therefore they can be solved by comprehensive programmes. Infrastructural development and civic amenities are required adequately.

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