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Community Medicine

HEALTH NEED ASSESSMENT IN AN URBAN SLUM AREA OF THRISSUR DISTRICT, KERALA, INDIA

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ABSTRACT

Background: The India is witnessing rapid urbanization in this 21st century. Due to this unplanned rapid urbanization, slum population emerged. Many of the health problems in slums come from the lack of access or demand for the basic services.

Methods: A community based cross-sectional study was conducted in a slum area in Thrissur District. Door to door survey was conducted in 93 households and data regarding 402 residents was collected using a standard semi-structured Heath Need Assessment questionnaire.

Results: The adult sex ratio was 1094 but under-five sex ratio was 800. Ante natal care and immunization coverage was 100%, but 33.33% of eligible couples had unmet need of family planning, 18.5% had started early weaning and 29.6% had given pre-lacteal feeds. Almost every household had vector breeding sites.

Conclusions: There is need for promotion of health awareness activities on family planning methods, breast feeding practices and integrated vector management.

KEYWORDS : Health need assessment, Urban slum, Immunization

INTRODUCTION

India is experiencing a rapid growth of population and it is continuing to grow each day. As per 2011 census, India's population was 1.21 billion contributing to 17.5% of the global population. The population growth has resulted in evolution of villages into towns and cities. As a result, there is gradual increase in the proportion of people living in urban areas expecting better employment opportunities, education and health facilities which ended in rapid urbanization. The term urbanization usually refers to the process of concentration of people in the densely populated settlements where majority of the people derive their livelihood from non-primary occupations. It is a finite process – a cycle through which a nation pass as they evolve from agrarian to industrial society[1] India is one of the fastest growing and urbanizing economies in the last decade, with a shift in the urban population from 27.86 % in 2001 to 31.16 % in 2011 and the urban rural ratio from 38.47 to 45.26 %[2]. This unplanned urban growth with inadequate social and economic planning along with poverty and social inequality results in the emergence of urban slums .The urbanization in India is often termed as pseudo urbanization, because of the fact that town planning and socio-infrastructural and institutional facilities are far behind and inefficient to meet the demand and supply to the need of growing urban population[3] The appearance of slums may be seen as a byproduct in the process of urbanization. The NSSO (National Sample survey Office) defines slums as declared and undeclared slums. The declared slums are those which have been formally declared as slums by the respective governing bodies and the undeclared slums is defined as "an aerial part having twenty-five or more kutcha houses mostly of temporary nature, or inhabited by persons with practically no private latrine and inadequate public latrine and safe water supply. Census 2011 found that there are 40,309 identified slums, constituting 37 per cent of the total. [2]

Kerala has been witnessing rapid urbanization since 1980 and Kerala occupies the 4th position regarding urbanization, compared to other Indian states. As per the 2011 census report in Kerala, the rural population constitutes 52.28 % and urban 47.27% of the entire population. The urban population in Kerala is higher than the national average of 31.16%. The decadal percentage of urban population has increased from 25.96% in 2001 to 47.74% in 2011, shows that high rate of urbanization taking place in Kerala.[2]

Considering the district wise trend in urbanization, as per census 2011, Ernakulam district has the highest urban population (68.07%), followed by Kozhikode (67.8%) and Thrissur (61.18%) districts respectively. According to 2011 census there were 133 notified slums in Thrissur district with 7898 households.

The poorly planned or unplanned urbanization have negative consequences for the health. Many of health problems in slums comes from the lack of access or demand for the basic services. Lack of safe drinking water, clean environment and garbage disposal creates serious threats to the health of slum population especially women and children as they spend most of their time in and around the area. The studies had shown that 60% urban poor children do not receive complete immunization compared to 58% in rural areas. About 59% of the women (15-49 age group) are anemic as compared to 57% in rural India. Among urban poor more than half of deliveries (56%) occurring at home and one in 10 children born in the slum did not see their fifth birth dad, while less than half were fully immunized. Nutrition levels of urban poor children are also alarmingly low with 54 % under five children stunted and 47 % underweight.[4] In addition, several health indicators among the urban poor are significantly worse than their rural counterparts. Mental health problems and substance abuse are the emerging problems among urban poor. Hence the present study was undertaken to assess the health status of an urban slum at Thrissur district, Kerala, India

METHODS

A community based cross-sectional study was conducted at a slum area in Thrissur district, Kerala during the six-month period from April to August 2018. The data was collected from residents (residing more than six months) in the slum area during the month of May. Door to door survey was conducted and study participants who were available during the survey was interviewed using a standard semi-structured Health Need Assessment questionnaire. All the family members residing in the slum were included. The locked households were contacted three times for collecting data and even after three visits if the house was found to be locked excluded from the study. The data collected was coded and entered in micro soft excel and analyzed using SPSS version 23. The Health Need Assessment questionnaire contain the details regarding socio-demographic characteristics like age, sex, educational status, occupation, socioeconomic status, number of

family members, questions about maternal and child health, incidence of communicable and non – communicable diseases, housing and environmental factors.

RESULTS

There were 93 families residing in the slum with total population comprising about 402. The mean age of study population was 36.77 ± 22.25 with minimum age ranging from 3 month to maximum age 92. Out of 402 total slum population 196 (48.8%) of them were males and 206(51.2%) of them were females. Majority 269(66.9%) of them belong to age group between 16- 60 years and there were 67 (16.7%) elderly population aged more than 60. There were 27 (6.7%) under 5 children and 39 (9.7%) children between 5- 15yr age group (Figure1) The adult sex ratio was1094 females for 1000 males. But under five sex ratio was 800 females for 1000 males.

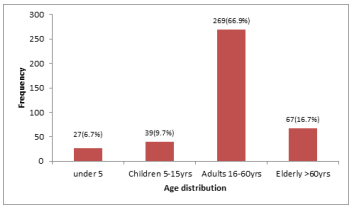

Figure 1: Age distribution of slum population (Total -402)

Majority of urban slum population had educational status up to high school 129 (34.4%) and 104 (27.7%) of them had educational status up to degree. There were 5 (1.35%) illiterates and 40 (10.7%) of them had educational status up to primary and 52(13.9%) of them had educational status up to secondary level. (Table 1) The maternal and childcare was assessed among the mothers of under five children and it was found that out of 27 mothers all had adequate antenatal care from specialist doctor with more than 9 antenatal visits. Everyone had taken TT injection, consumed minimum 100 Iron folic acid tablets during their pregnancy period and started breastfeeding within 1 hour after delivery. Majority of them 18 (66.7%) of them had their delivery from private hospital and 9 (33.3%) of them from Government hospitals.

Table 1: Educational status of study population (N= 375 excluding under 5 children)

Educational status	Number (375)	Percentage (100%)
Illiterate	5	1.3%
Primary	40	10.7%
Secondary	52	13.9%
High school	129	34.4%
Higher secondary	45	12%
Degree	104	27.7%

Even though the antenatal care was adequate, 5 (18.5%) mothers had started weaning before 6 months and 8(29.6%) mothers had given pre-lacteal feeds soon after delivery in the form of zam zam water (5 mothers) and honey (3 mothers). Out of 27 mothers 5 mothers had started weaning at 3 months of age. All under five children were fully immunized up to age and mothers had kept their immunisation card safely for future references.

Out of total 402 slum population 65 of them were suffering from chronic diseases like Diabetes Mellitus (DM), Hypertension, CAD (Coronary Artery Disease), dyslipidaemia, CVA (Coronary Vascular Disease) and hypothyroidism. Out of total 93 families, six of them were residing in Kutcha house. Majority of families (80 families) were using only LPG for cooking and 10 families were using both LPG & firewood and 3 families were using only firewood. The ventilation and lighting among 3 houses were inadequate. The major source of drinking water was from corporation pipe and 3 houses were having their own well. All families were using boiling as method for purification of drinking water. Almost every household were having vector breeding sites, due to stagnant water collections around the house.

There were 54 eligible couples among slum population and among them only 30 had adopted family planning methods (55.55%). The majority 28 (93.33%) had undergone postpartum sterilization and 2(6.6%) couples had followed IUCD (Intra Uterine Contraceptive Devices). Among 54 eligible couples, six couples were not willing to adopt any family planning methods, because of various reasons like family not completed (4 couples) and 2 couples on infertility treatment (Table 2). Hence unmet need for family planning 18/54= 33.3%. There was significant association between knowledge of family planning and current usage of contraception. (Fischer s exact value -11.522 and p value -0.001) Table 3.

Table 2: Details regarding family planning methods among eligible couples in the slum population

Particular		N=54
Current use of family planning method		**30(55.55%)**
Type of family planning method used	Postpartum sterilization	28(93.33%)
	IUCD	2(6.6%)
Not willing for family planning method		**6(11.11%)**
Reason for not willing	Family not completed	4(66.66%)
	Infertility treatment	2(33.33%)
Unmet need for family planning		**18(33.33%)**

Table 3: Association between family planning method adoption and educational status

Knowledge of family planning	Current use of family planning methods		Total	Statistical significance
	Yes	No		
Yes	30(65.2%)	16(34.8%)	46(100%)	Fischer's exact value 11.52 P value **-0.001**
No	0	8(100%)	8(100%)	
Total	30(55.6%)	24(44.44%)	54(100%)	

DISCUSSION

According to this current study, 66.9% of the population comes under the age group of 16 to 60 years. About 16.2% of the population were suffering from chronic diseases. Out of total 93 families, majority of them were residing in pucca house. The ventilation and lighting were inadequate in three houses. The major source of drinking water was from corporation pipe and three houses were having their own well. All of them used boiled water for drinking and firewood was the main source of fuel. The adult sex ratio was 1094 which was favourable, whereas under five sex ratio was 800 which was found to be unfavourable. Most of the urban slum population had educational status up to high school. The assessment of maternal and childcare among the mothers of under five children and found that all mothers had proper and adequate antenatal care at a specialist doctor. But many of them had started early weaning and had given pre-lacteal feeds before six months. There was significant association between knowledge of family planning and use of contraception.

A similar study at Kannur slums[5] showed that almost all households reported lack of drainage; Potable water and toilet facilities were the critical issues. Most of the residents of slums do not constitute a skilled working class. The housing conditions in the slum presents a grim scenario. About 25 percent of houses are pucca and 68.2 percent were semi pucca in notified area and non-notified area, it is 6.4 and 79 percent respectively. The largest household had a semi pucca house. Most of the household have only one room. The most crowded household had seven people to a room. As regard, other amenities, it has been observed that 86.4 and 69.4 percent of notified and non-notified household have no latrines. Thus, the slum dwellers suffer from tremendous deprivation of sanitation, room space, cooking, bathing, defecating and washing space. Regarding the electrification of the slum households, it has been observed that majority of the household had electricity.

Results showed high level of illiteracy with 63.2% men and 75.3.4% women having no education. About 30% of women married within age of 15-24 years had four or more children. Most families had only one working member. Most common occupations (36.5%) were street vendors, garbage collectors, trash vendor and daily wage labourer; and 17% were unemployed. Most houses had electricity (95%) and toilets (94%) inside their house. Many children had an episode of diarrhea (66%) or ARI (38%) in the preceding month. About 49% of the houses reported that nearest government health facility is within one kilometre distance, while for 23% houses, there was no government health facility within 5 kilometres distance. About 34% of uneducated mothers had four or more children while only 1.4% of those with higher education had 4 or more children. Less educated mothers were breast feeding their children completely and half of them were starting weaning at appropriate time. Positive relationship was there between

mother education and children going to school; less diarrhoea and ARI, while there was negative relationship of mother's education on breastfeeding. The results were significant.

Another study at Pakistan[6] showed high level of illiteracy with 63.2% men and 75% of women having no education. Most of the families had only one working member. Most common occupations include street vendors, garbage collectors, trash vendors and daily wage labourers. Most of the children had diarrhoea or acute respiratory tract infection in the preceding month. Less educated mothers were breast feeding their children completely and half of them had started weaning at appropriate time.

A cross sectional study at Mumbai slums[7] reported that the percentage of households earning less than 12,000 INR monthly was 76.6% and nearly 50% reported earned less than 9,000 INR (USD 135). Majority of women (83%) did not engage in any paid labour and instead performed unpaid work in the home; only 32% of men were in a permanent job, in contrast to 54% of men in temporary/casual labour. Participants with higher levels of education were more likely to be aware of hypertension and diabetes as compared to those with lower levels of education. The self-reported prevalence of diabetes was 2% amongst men and 4% amongst women. Participants reported higher prevalence of the two conditions amongst family members, 26% for hypertension and 20% for diabetes, with 10% of families affected by both conditions.

In a study conducted by Dr. Sribas Goswami & Prof. Samita Manna in Raipur city in India[8], there were 52.33% males and 47.66% females. The literacy rate was good (92%). Treatment at government hospitals is apparently cheaper, but due to inconvenience in waiting for the treatment they prefer more expensive private treatment.

Malvika Singh Parmar conducted a study in the slums of Jaipur, India [9]stated that it is women who are most impacted by poor housing conditions .The sewer lines have been laid only on the outer limits of the slums while more densely populated pockets of the slum have not started using the sewer connection because of the high cost of constructing a toilet in the house. This creates excessive difficulty for the women in the slums who have to walk to the nearby forest for this purpose. The women face strict social restrictions, which limits their chances of getting education.

In a study conducted by M. M. Rajeev in the slums in Kollam district, Kerala, India[10], majority (33.3%) of the respondents are 40-50 age groups. The study shows that 1st standard is the minimum education of the respondents and 12th is the maximum education of the respondents. This reveals that the respondents are educationally backward. There were 6.67% TB patients, 3.33% of cancer patients, 11.67% lifestyle diseases and 78.33% of the respondents were affected other minor health issues such as respiratory, skin, allergic issues and other general health diseases.

Another study conducted by Chandramouli et al in Chennai[11], India found that the total slum population of Tamil Nadu forms around 20.02 % of the total population of the selected Towns. The number of males (548,517) outnumbers the number of females (530,897) in the slum areas and this indicates that in general more males are migrating to the city in search of employment. The literacy rate for the slum population is 71% and males (77%) have a higher literacy rate than females (65%). Majority (67%) of the households in slums live in one-room tenements. Only 2% of the households in slums have more than 3 rooms. More than a third of the households (34%) in slums had no latrines which results in open defecation and consequently the spread of diseases.

Conclusion and recommendations

The adult sex ratio was favourable whereas under-five sex ratio was unfavourable and 33.3% of eligible couples had unmet need of family planning,18.5% had started early weaning and 29.6% had given pre-lacteal feeds. There is significant difference between knowledge and current use of family planning method. Hence the Reproductive and child Health programmes should be strengthened. Open drains and mosquito breeding sites were there in the surroundings and with the help of local self-governments. Monthly mobile clinics are needed for treatment of common acute and chronic diseases. LSGD (Local Self Government Department) should construct flats for slum people and should raise their standards of living. Findings suggest that integrated services and public-private partnerships could help address demand for affordable community-based care and progress towards the target of universal health coverage.

DECLARATIONS

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