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Original Research Article

A cross-sectional study to assess the morbidity pattern, healthcare-seeking behavior and its determinants among adults of urban slum dwellers of Chennai

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ABSTRACT

Background: Health seeking behavior is an important decision in health care management and it becomes more relevant among underprivileged populations like urban slums. The objectives of the study was to find out the morbidity pattern, health care seeking behaviours , the morbidity pattern its determinants among urban slum dwellers in Chennai.
Methods: This descriptive cross sectional study was conducted among 400 respondents of Nallakuppam slum in Chennai by systematic random sampling method from October 2017 to October 2019. A semi structured schedule was used to collect information among them after their valid informed consent. Descriptive statistics such as frequency and percentage were used. Chi square test was used to assess the association between factors.
Results: Almost half of the study participants (53.50%) were female and 30.50% have completed high school education. Hindu was the major religion practiced and most of them belonged to lower middle socio economic class. Though majority of the study population suffered from communicable diseases like ARI and fever which might be due to overcrowding in that area, treatment seeking behavior was found to be good among the study participant suffering from non-communicable disease like DM, HTN and CHD, which showed that the type of disease played an vital role in seeking treatment among the study participants.
Conclusions: Though the study participants had different choice in health care such as government, private or some time both facilities for treating their illness, trust on the health care provider played an important role in availing services from particular health care facilities.

Keywords: Communicable disease, Health seeking behavior, Non communicable disease, Urban slum

INTRODUCTION

The newer definition states that 'Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity' according to World Health Organization (WHO).[1] This focused on physical and psychological wellbeing because the two major heath aspects such as good health and poor health cannot be merged together as they were quite distinct from each other. The mere absences of disease or the disability were not sufficient and necessary to provide a state of good health. The current definition has better understanding of the goals of health as well as for the metrics of value-based care, there by emphasizing the need for goal-based metrics, patient-centred approach and the importance of good quantity of overall health, so as to significantly improve and preserve health status. Factors like educational levels, economic factors, cultural beliefs and practices in the community are effectively determining the utilization of a health care system along

with the availability of large number of avenues existing for seeking health care such as allopathic system, alternative medicine like AYUSH, traditional herbal medicine to faith- healers. [2-3]

In many developing countries, the public and the private health sector synchronize with each other to provide health care for the people. But innumerable times, the preferred health care system is the private care system owing to their easy approachability even in the odd timings, for their special individual attention and quick relief.[4] The ultimate desire of the patient is to get recovered by their choice of medicine, interventions and the different health sectors they have chosen for treating their health problems

It is anticipated by 2025, the world population will reach 8.1 billion and the majority of the growth will be taking place in developing countries.[5] The slums are said to symbolize the fundamental transformation of human health along with the physical and social environment of cities.[6] It is estimated that nearly one fourth of the world's urban population are living in slums.[7-8] A special attention on slum populations will be decisive, especially towards achieving the Sustainable Development Goal (SDG), to 'ensure healthy lives and promote well-being for all age groups.[9]

Currently, low and middle-income countries experience 82% of the global burden of death occurring prematurely due to Non Communicable Diseases (NCD) of which about 250 million who have suffered from NCD were of slum dwellers.[10-11] Further, the environmental condition and social factors make slums prone for several communicable diseases like ARI, diarrhea, fever, skin infections etc.

The previous studies among adult dwellers of slum were observed mostly from either hospitals or health center but not a community based study in Tamil Nadu, so I did this study to assess the morbidity pattern of certain communicable disease and non-communicable disease along with their health care-seeking behavior and its determinants in the community setting among adults of urban slum dwellers of Saidapet, Chennai.

The objective of the study was to study the morbidity pattern and health care seeking behaviors of Diabetes mellitus, Hypertension and Cardiovascular diseases among non-communicable disease and acute respiratory illness, Fever and Diarrhea among communicable diseases among adults of urban slum dwellers of Chennai. Also to find out the determinants of health care utilization among adults of urban slums dwellers of Chennai.

METHODS

This Community based descriptive cross –sectional study was conducted among adult slum dwellers from Nallakuppam slum in Saidapet, Chennai. After taking their valid informed consent, they were included in the study. Duration of the study was October 2017 to October 2019.

Sample size

In a study conducted among slum dwellers, in Dharavi, Mumbai slum area, health seeking behavior was found to be 14%.12 Sample size was calculated using the formula 4pq/ (d) 2, and after adding non response rate of 20%, it was rounded off to 400 samples.

Sampling method

Nallakuppam slum was selected by simple random sampling method using Lottery method among all the slums of central Chennai. There were 1500 households in NallaKuppam slum, as my sample size was 400, through systematic random sampling every 3rd house was visited and an adult in the house hold was interviewed by face to face approach after taking the consent. In case of more than 2 adult above 18 years residing in the same house, Kish Gird was used to select the participants. If the house was found to be closed on three consecutive visits on three different days, then the house was excluded and next house was selected without disturbing the sequence, till the sample size was achieved.

Inclusion criteria were those above 18 years of age both male and female, residing in Nallakupam slum for more than one year.

Exclusion criteria were those below 18 years of age, seriously ill patients, pregnant women and those who were not willing to participate in the study were excluded

Data collection instrument was semi-structured schedule adopted from study done in Dharavi slum, Mumbai.[12] It then translated to local Tamil language. Linguistic validation was done by forward translation and back ward translation by third person other than the investigator. The schedule consist of questions on socio-demographic profile, morbidity pattern and health care seeking behaviors of Diabetes Mellitus, Hypertension and Cardio Vascular Disease in Non Communicable Disease and Acute respiratory illness, Fever and Diarrhea in communicable diseases along with its determinants for health care utilization .

Pilot testing was done on 44 slum dwellers and the schedule was accordingly modified. The results of pilot study were not included in the final analysis

Institutional Ethics Committee permission for the study was obtained before the initiation of the study.

The subject was interviewed face to face using the pre-tested, validated schedule in the household after obtaining written informed consent. Privacy and confidentiality were maintained.

Data were entered in Microsoft Excel and analyzed using the Statistical Package for Social Science (SPSS) version 23.0. Descriptive statistics such as frequency and percentage were calculated. Association between various study variables were calculated using chi-square test, and p-value less than 0.05 was considered statistically significant.

Operational definition

Acute Respiratory Illness: Suffered from symptoms of cough, running nose & sore throat in the past 3 months.

Fever: Suffered from fever, increase in body temperature > 98.4°F for more than 3 days in the past 3 months.

Diarrhea: Experienced passing of loose stools/altered stools more than 3 times a day in last 3 months.

CVD: Any known case of IHD / CHD and taking medication for chronic chest pain.

RESULTS

In this study, 53.50% of the study population were female, 30.50% have completed high school education and majority of the study population belong to Hindu community (84.50%), More than three forth of the study populations were married (82%), More than two third of the study participants were permanent resident (74.50%) of the slum while 25.50% of study participants were temporarily residing in the slum (Table 1).

Table 1: Socio-demographic profile (n=400).

	Socio-demographic profile	Frequency	Percentage
Age (in years)	18-25	79	19.75
	26-35	87	21.75
	36-45	87	21.75
	46-55	75	18.75
	56-65	37	9.25
	66 and above	35	8.75
Sex	Male	186	46.50
	Female	214	53.50
Religion	Hindu	338	84.50
	Muslim	31	7.75
	Christian	30	7.50
	Others	1	0.25
Marital status	Married	328	82.00
	Married but separated	1	0.25
	Divorced	1	0.25
	Widow	2	0.50
	Unmarried	68	17.00
Education	Illitrate	71	17.75
	Primary school	46	11.50
	Middle school	106	26.50
	High school	122	30.50
	Post high school diploma	50	12.50
	Graduate or post graduate	5	1.25
Address	Permanent	298	74.50
	Temp	100	25.00
	Others	2	0.50
Occupation	Unemployed	192	48.
	Unskilledd	12	3.00
	Semi-skilled	58	14.50
	Skilled	84	21.00
	Clerical, shop-owner, farmer	33	8.25
	Semi-professional	19	4.75
	Professional	2	0.50

Less than half of the study populations were suffering from non-communicable diseases like DM (31%), HTN (47%) and CVD (22%) while, More than two third of the study participants were suffering from communicable diseases like ARI (49%), fever (38%) and diarrhea (13%) past 3 months (Figure 1, 2).

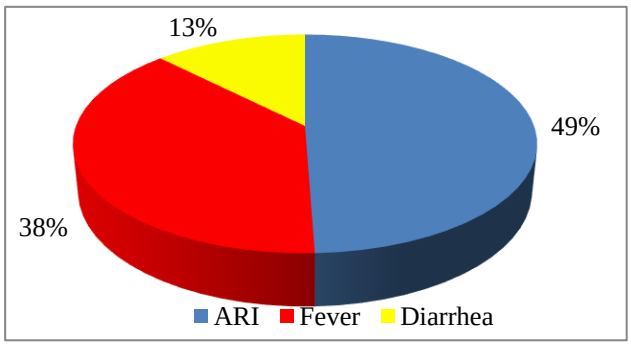

Figure 1: Distribution of the study population based Communicable diseases (n=265).

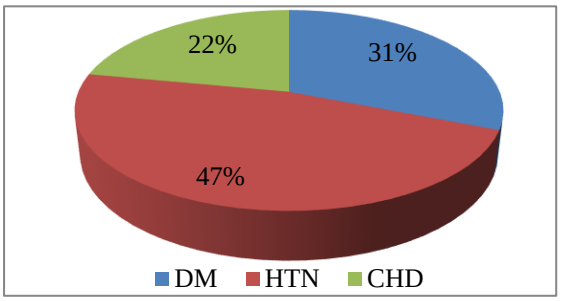

Figure 2: Distribution of the study populations based on Non-communicable diseases (n=135).

Overall perception of the study participants about their health was asked and the study respondents rated their own health on the basis of Likert's scale as better (34.50%), good (33%), excellent (17%), average (14.25%) and bad (1.25%) (Figure 3).

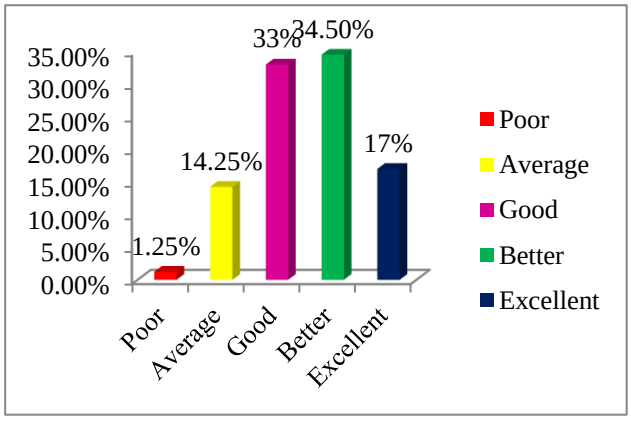

Figure 3: Perception about study participants own health (n=400).

More than half of the study participants (58.2%) revealed trust over health care providers as a determinant for choosing health care facility (Table 2).

Table 2: Reason to choose particular health services (n=400).

Reason to choose particular health services	Frequency	Percentage
Trust over the provider of facilities	234	58.5
Near to home	80	20
Good quality treatment	45	11.25
Affordability	21	5.25
Staff availability	16	4
Co-operative behavior	4	1
Total	400	100

In this study, majority of the participants (64%) revealed that type of the disease as a major reason for prioritized treatment seeking behavior (Table 3).

Table 3: Factors prioritize treatment seeking behavior (n=400).

Factors prioritize treatment seeking behavior	Frequency	Percentage
Type of disease	256	64
Age of the patient	93	23.25
Severity of disease	27	6.75
Economic Condition	18	4.50
Depends on decision of head of family	3	0.75
Gender of the patient	3	0.75
Total	400	100

DISCUSSION

In this study, prevalence of DM was 12% among the adult slum dwellers. Similar prevalence of DM was found in the study done in Jamaica among the general population (11.3%) and in a study done by in Malaysia among diabetic patients (14%).This similarities in the prevalence of DM might be because the above mentioned studies done in developing countries.[13-14]

In this study, prevalence of hypertension was 18% among the adult slum dwellers. In a study among the general population from multiple centers in Tamil Nadu, reported that 25.9% of the study participants were suffering from HTN and in a study done among rural and urban general population of Agra District reported that average of 32.96% of the study population were suffering from HTN. This difference in prevalence of HTN in the above studies might be due to the difference in study population,

sample size, cultural behavior, study setting and mean age of the study population.[15-16]

In this study, prevalence of CVD among the adult slum dwellers was 3.75% and similar result (3.5%) was found in Royal College of General Practitioners (RCGP) Research and Surveillance Centre (RSC) study among patients attending primary care. This similarity may be due to limitation of symptoms of CVD in the operational definition of both the studies.[17]

In this study, prevalence of ARI was 32.75% among the adult slum dwellers.

Similarly, prevalence (25%) of ARI was found in a study conducted in Dhaka Slum among slum dwellers. This similarity might be because of study setting, SES and similar sanitary practices among the study participants in the study.[18]

In this study, prevalence of fever was 25.2% among the adult slum dwellers. In a study conducted among general population of Pakistan, it was found that 30.5% of the study participants were suffering from fever. This similarity might be due to similar unhygienic location of the study.[19]

In this study, 8.25% of the study participants were found to be suffering from diarrhea. In a study among persons living in at-risk settings in Kabul, it was reported that 20% of the study participants were found to be suffering from diarrhea. The difference might be because of the difference in study location and war prone study setting of the study.[20]

In our study, 56.8% of the study participants stated that the trust on the health care provider was the major determinate factor for seeking treatment from particular health care provider. In a study conducted in Dharavi slum, it was found that 31.5% of the study participants soughed treatment from particular health facilities because of trust on the health care provider, the other reason cited by the study participants for choosing particular health care facility for seeking treatment for the illness was accessibility to the health care facilities (20%), affordability (1.75%), quality treatment (10.25%) and co-operative behavior of the health care provider (12.5%). This difference in seeking treatment from health care provider might be because of the difference in study location, beliefs, culture and SES of the study participants in the study.[12] In our study, nearly two third of the study participants (64%) stated that type of the disease was the major factor for seeking health care, in contrast to the qualitative study done among urban slum dwellers from Bangladesh, it was reported by study participants that major determining factor was financial constraints in seeking health care facility and the main notable barrier cited in the above study was poor perception of the health among the study participants. This difference might be due to difference SES, study area and cultural practices of the study participants in the study.[21]

Some limitation identified in this study like illness episodes were self-reported by the study participants in this study, which may be a potential chance for recall bias and morbidity pattern of few diseases under communicable and non-communicable were studied hence the study results cannot be generalized to all communicable and non-communicable disease prevailing in the slum.

CONCLUSION

Though the study participants had different choice in health care such as government, private or some time both facilities for treating their illness, trust on the health care provider played an important role in availing services from particular health care facilities. There is an inadequate data on health seeking behavior and about their determinants, especially for acute illnesses like ARI, fever, diarrhea among adult population in community; hence more community based study about the above mentioned illnesses among adults might generate more evidence to tackle the problem faced in planning and delivering health.

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Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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