International Journal of Community Medicine and Public Health
Rahmath SS et al. Int J Community Med Public Health. 2024 Jan;11(1):222-227
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: https://dx.doi.org/10.18203/2394-6040.ijcmph20234129

Original Research Article

Understanding the social determinants of individuals' health in an area of Hyderabad: a cross sectional study

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Received: 18 October 2023
Revised: 30 November 2023
Accepted: 02 December 2023

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ABSTRACT

Background: The population of India is diverse and heterogeneous, comprising different social groups like castes, religions, languages, and regions. It faces many challenges, such as poverty, illiteracy, malnutrition, lack of access to health care, sanitation, education, and infrastructure. Due to lack of proper knowledge, there is an inadequate health seeking behaviour among the people about the importance of health. This study helps us to know the most prevalent morbid conditions and how health status affects various aspects of life.
Methods: A survey was conducted by students of Deccan College of Medical Sciences under the guidance of the department of community medicine. A total of 200 families with 1101 individuals were surveyed on various parameters in quality of life, immunization, literacy and marital status. The data was analysed using descriptive statistics.
Results: In this study, 554 were males (50.31%) and 547 females (49.68%). Predominant age group was of 16-45 years (54.58%) and the least belonged to above 60 (3.17%). 12.17% individuals were illiterate while only 6.53% pursued higher education. There were 31 (51.67%) males and 29 (48.33%) females that were fully immunized and 3% females were not immunized. Hypertension exhibited highest prevalence at 41.36%. Majority of the population fell into socioeconomic status class III (41.32%).
Conclusions: Community diagnosis is an effective tool in assessing the health status of an area. It can help the health officials and healthcare centres to take appropriate measures suitable to handle the problems prevailing in that area.

Keywords: Community diagnosis, Health status, Social determinants

INTRODUCTION

India, although famous for its unity and culture, is divided into two sectors: urban and rural, based on geography and lifestyle. Majority population belongs to the rural area where lifestyle, occupation, income, housing, literacy is different from urban population. When counted together, its population is in a constant contest with China for being the highest population in the world with the current population being 142.58 crores.[1] A country with such a population is bound to have problems of its own. Although India has been trying for years to rise above the title of developing country, it has been yet to be successful despite its growing and rising population. It can be attributed to multiple causes but it can all link back to one thing. That is the health status of an individual living in a community. Community is the backbone of a country. If the community flourishes the country flourishes. And to flourish the community needs individuals that are of sound mind and body.[2,3] Disease is something that decreases the functionality and productivity of an individual and the country as a whole.

The thing to understand here is India has a growing type of population with a huge population belonging in the age group 15-64.[4] Although the literacy rate of India has seen

a great deal of improvement from the previous decades, it still is lagging behind especially in female education.[5] And this has shown a considerable impact on the health status of an individual, their families and in the community. Lack of education leads to decrease in knowledge about the disease and also affects health seeking behaviour. Occupation is another factor that affects the health of an individual. One way is by exposing to pollution like air pollution that can lead to respiratory problems and COPD, other through the physical movement required.[6] Immunisation is another factor which plays an important role in protecting an individual and thereby the community from transmittable disease by building immunity.[7]

Community diagnosis is a process of assessing the health problems and needs of a community, as well as the available resources and potential solutions. It involves collecting and analysing data from various sources, such as surveys, interviews, observations, records, and reports. Community diagnosis can help identify the most common and urgent health issues in a community, such as infectious diseases, chronic conditions, malnutrition, environmental hazards, etc. It can also help to determine the factors that influence disease prevalence such as socioeconomic status, education, culture, behaviour, gender, immunisation, income, occupation, diet, lifestyle etc. Community diagnosis can also provide a basis for planning, implementing, and evaluating health interventions that are tailored to the specific needs and characteristics of a community

Highest prevalence of disease was found to be in rural areas according to a study in Karnataka.[8] So as rural areas are with a large population and high risk of disease, hence selected as a study population. In this community diagnosis, Hasan Nagar a rural area of Hyderabad, Telangana was explored by the faculties and students of Deccan College of Medical Sciences with the help of the medical social worker.

Aim

The aim was to study the health status of a community in a rural area under RHTC of a medical college.

Objectives

To assess the health status of a community. To identify the determinant of health problems.

METHODS

A community based, cross sectional study was carried out by the MBBS final part-I students during the period of November 2022 to January 2023 under the guidance of department of community medicine in Hasan Nagar which is a rural field practice area of Deccan College of Medical Sciences, Hyderabad. The students were trained and guided by the faculties before the survey. The families were selected randomly for the collection of data. The data was collected using a pre designed and pre tested semi-structured questionnaire by personal interviews.

Residents who gave consent for the study and were of sound mind were included in study. The individuals who are visiting or staying in the selected area temporarily were not included in study. In this study, a total of 200 families which consisted of 1101 individuals were surveyed. The data was collected about disease prevalence and socio demographic parameters and environmental factors like number of individuals, age, sex, occupation, literacy status, immunization status and living conditions. The data was entered and compiled using MS Excel. The analysis was carried out by SPSS version 20. The qualitative data was described in frequency, quantitative data was described in mean and standard deviation and chi square test was applied to find the significance. The $p<0.05$ was used as statistically significant at 5% level of significance.

RESULTS

This cross-sectional survey consists of 1101 individuals belonging to 200 families. In the given study there were a total of 554 males (50.31%) and 547 females (49.68%) with sex ratio of 988 females per 1000 males (Table 1). There were 140 diseased people, diseased females (86) were more than males (54) (Table 4). In the present survey, the majority of the population belonged to the age group (Table 1) of 16-45 years (54.58%). There were 35 (3.17%) individuals above the age of 60 out of which 25 (71.43%) were diseased. This shows that even though the least number of individuals belonging to the age group of more than 60 still constituted the majority of diseased population (Table 4).

Among the morbid conditions hypertension was most prevalent with 41.36% of the population (females 40.49% and males 42.85%). Diabetes mellitus was the next most prevalent condition with 30.89% of individuals affected. 1.04% had geriatric problems like arthritis and 4.18% had eye problems like cataract (Table 2). For children below the age of 5 immunization status was taken. There were 59.5% that were fully immunized and 38% were partially immunized and there were 3 not immunized females. In the given population there are 7 pregnant women and all of them were fully immunized (Table 3). Among the 487 (44.23%) individuals that were married there were 236 (42.59%) males and 251 (45.88%) females. There were 13.6% unmarried and 4% individuals were either widowed or divorced (Table 1).

Table 1: Demographic details of study population.

Variables	Categories	Males		Females		Total	
		Frequency	%	Frequency	%	Frequency	%
Age group (years)	<5	64	11.55	62	11.33	126	11.44
	6-15	115	20.75	103	18.82	218	19.8
	16-45	294	53.06	307	56.12	601	54.58
	46-60	62	11.19	59	10.78	121	10.99
	>60	19	3.42	16	2.92	35	3.17
Marital status	Married	236	42.59	251	45.88	487	44.23
	Unmarried	80	14.44	70	12.79	150	13.62
	Ineligible	234	42.23	185	33.82	419	38.05
	Widowed/divorced	4	0.72	41	7.49	45	4.08
Literacy status	Illiterate	58	10.46	82	14.99	140	12.71
	Standard 1-7	169	30.5	162	29.61	331	30.06
	Standard 8-12	169	30.5	178	32.54	347	31.51
	College	41	7.4	31	5.66	72	6.53
	Not applicable	76	13.71	72	13.16	148	13.44
	Read and write	32	5.77	17	3.1	49	4.45
Occupation	Professional	9	1.62	5	0.91	14	1.27
	Not eligible	217	39.16	226	41.31	443	40.23
	Unemployed	45	8.12	41	7.49	86	7.81
	Unskilled	84	15.16	7	1.27	91	8.26
	Skilled	141	25.45	8	1.46	149	13.53
	Clerical	7	1.26	1	0.18	8	0.72
	Professional	7	1.26	2	0.36	9	0.81
	Business	33	5.95	3	0.54	36	3.26
	Housewife	0	0	256	46.8	256	23.25
	Retired	19	3.42	4	0.73	23	2.08

Table 2: Disease distribution of study population.

Health status	Male		Female		Total	
	Frequency	%	Frequency	%	Frequency	%
Hypertension	30	42.85	49	40.49	79	41.36
Diabetes	21	30	38	31.4	59	30.89
Tuberculosis	0	0	1	0.82	1	0.52
Geriatric problems	0	0	2	1.65	2	1.04
Pregnancy	0	0	7	5.78	7	3.66
Eye problems	5	7.14	3	2.47	8	4.18
Other problems	14	20	21	17.35	35	18.32

Table 3: Association between immunization versus gender.

		Sex		Total (%)	Chi-square	P value
		Male (%)	Female (%)			
Immunization	FI	31 (51.67)	29 (48.33)	60 (58.25%)	3.157	0.206
	NI	0	3 (100)	3 (2.91%)		
	PI	21 (52.5)	19 (47.5)	40 (38.83%)		
Total		52 (50.5%)	51 (49.5)	103		

Majority of the individuals attended and passed high school (standard 8-12). There were 347 (31.51%) individuals of which 32.54% were females and 30.5% were males that passed high school. In the total study population 12.71% were illiterate. Among the 1.27% of people who went to professional colleges 0.91% were females and 1.62% were males. There were 49 (4.45%) of people that can read and write. There were 256 (23.25%)

housewives, 86 (7.81%) unemployed individuals, 8.26% were unskilled workers and 13.53% were skilled workers, 3.26% of individuals had their own business and 0.81% had a professional job and 2.08% were retired (Table 1). The socio economic status was calculated based on modified BG Prasad scale 2022.[9] In our survey, the majority of the individuals belonged to class III (middle class) comprising 41.32% followed by class II with 26.52% of individuals and the least number of people belonged to class V (lower class) with 6.72% (Figure 1).

Table 4: Association between the study parameters and health status.

		Diseased (%)	Non-diseased (%)	Total	Chi-square	P value
Gender	Male	54 (9.74)	500 (90.26%)	554	8.85	0.0029
	Female	86 (15.72)	461 (84.28%)	547		
Marital status	Married	109 (22.38)	378 (77.68%)	487	282.91	0.001
	Unmarried	8 (1.41)	561 (98.59%)	569		
	Widow/divorce	23 (51.11)	22 48.89%)	45		
Age (years)	<5	1 (0.97)	102 (99.03%)	103	142.8	0.0001
	5-15	1 (0.41)	240 (99.59%)	241		
	16-45	58 (9.65)	543 (90.35%)	601		
	46-60	55 (45.5)	66 (54.55%)	121		
	>60	25 (71.43)	10 (28.57%)	35		
Literacy status	Illiterate	37 (26.43)	103 (73.57%)	140	122.768	0.004
	Read and write	8 (16.3)	41 (83.7%)	49		
	Not applicable	1 (0.68)	147 (99.32%)	148		
	Standard 1-12	81 (11.95)	597 (88.05%)	678		
	College	10 (13.89)	62 (86.1%)	72		
	Professional	3 (21.43)	11 (78.57%)	14		
Total		140 (12.72%)	961 (87.28)	1101		

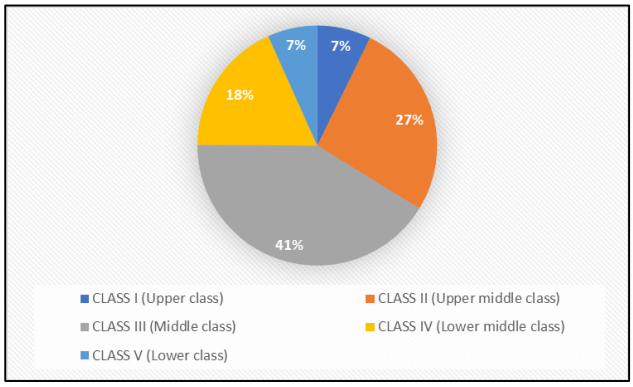

Figure 1: Pie diagram for socio-economic status (n=1101).

DISCUSSION

We conducted community diagnosis in rural area to identify the health problems and health needs of the population. This study provides us a comprehensive picture of the health situation of a community and factors that influence incidence and prevalence of the disease. In this study we collected the information from 1101 individuals in 200 families. In this study the sex ratio was 988 females per 1000 males which is similar to a study conducted in Karnataka.[8] In this study it was noted that 3.17% belonged to the >60 age group which is almost similar to a study conducted by a government medical college in New Delhi in which it was found to be 5%.[10]

Around 65% of the population belonged to the age group 16-60 which indicates that India's population is a growing type of population. Findings similar to a study by Patel et al.[11]

Among the under 5 years children, 59.5% were completely immunised. This was in contrast to a study done by Ratta et al where 65.98% children were completely immunised.[12] The decrease in the immunisation status in our study could be due to lack of awareness of the immunisation schedule and the importance of it. We found that 12.71% of individuals were illiterate which is almost similar to the findings in a survey conducted by Ahmed et al.[13] With both being constant with females being more illiterate. This shows that although overall illiteracy has decreased, female illiteracy still persists. This places the literacy rate at 87.29% in this study. This shows a positive development in relation to gaining education. Majority of the individuals were high school graduates similar to the study in Kolkata.[14] In this study we found that 44.23% of individuals were married which is similar to a study conducted by Ahmed et al.[13]About 40% of individuals were not eligible under the criteria of occupation, 7.81% were unemployed, 23.25% were housewives and 2.08% were retired, similar to the study done by Patel et al.[11]

In our survey majority of the individuals belonged to class III (middle class) comprising up to 41.32% followed by class II with 26.52% of individuals which was in contrast to a study done in Chennai.[15] This could

be due to our study being conducted in rural area situated in the middle of a metropolitan city like Hyderabad and the efforts of the Telangana government towards rural development.[16] Coming to the health status, morbidity was found in 17.34% of the population of which the majority were diagnosed with hypertension (41.36%) with higher frequency in male. This hypertension finding was more or less similar to a study conducted in Maharashtra (46.1%) with similar higher frequency in males.[17] Another study done by Paul in US and another in north India.[18,19] The next morbidity with high frequency is diabetes 30.89% which is similar to a study done in Tamil Nadu.[20]

We acknowledge that there could be some information gap that might be because of absence of head of the family at the time house visit. Nonetheless, the study was done selecting random households to remove the bias and to include diverse population and the information collected is credible to the best of our knowledge.

CONCLUSION

This study gives us an insight as to how the health of an individual affects various aspects of his life. Healthy living habits should be promoted and awareness should be spread about various methods like improvement in environmental conditions, literacy, immunization and screening of chronic diseases etc at individual and community level. It can foster inter-sector coordination and collaboration among different stakeholders to fulfil the needs of the community.

ACKNOWLEDGEMENTS

We would like to thank the faculties of community medicine department, Medico Social Worker and support staff of RHTC for helping in data collection.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Rahmath SS, Nimrah S, Ahmad SR, Madhipati SK. Understanding the social determinants of individuals' health in an area of Hyderabad: a cross sectional study. Int J Community Med Public Health 2024;11:222-7.