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Research Article

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Socio-demographic profile and pattern of illness among patients attending outpatient department of a tertiary care hospital in Tamil Nadu

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ABSTRACT

Background: India has made significant progress in improving the health conditions of its population. There has been a general decrease in mortality leading to significant gains in life expectancy, while what has happened to morbidity is yet to be assessed. Very little information is available about the disease profile of different population groups in India. The objective of the study was to study socio-demographic profile and pattern of illness among patients attending the outpatient department of a Tertiary care hospital.

Methods: A descriptive study was conducted among patients attending the outpatient department of a private tertiary care hospital. Sample selection was done using systematic sampling technique. Data was collected in a pretested and semi structured questionnaire and analysed using appropriate statistical methods.

Results: Majority of the reported patients were females, majority were in the economically productive age group, majority were educated up to high school and above and majority of patients belonged to lower socioeconomic class. Most common illness among patients in our study was pain abdomen followed by knee pain and cough/cold. The most commonly affected organ systems were musculoskeletal, gastrointestinal and skin, reproductive as well as respiratory system.

Conclusions: Reported pattern of diseases may be helpful for health planners to frame policies capable of facing future challenges. The present study may also guide health managers in strengthening and remodelling health care facilities for attaining better satisfaction levels for both patients as well as health care providers.

Keywords: Hospitals, Morbidity, Outpatients

INTRODUCTION

Improving health around the world today is an important social objective, which has obvious direct payoffs in terms of longer and better lives for millions. There is also a growing consensus that improving health can have equally large indirect payoffs through accelerating economic growth. From the time of Alma Ata declaration to the achievement of "Millennium development goals", lot of planning, effort and public expenditure has been

devoted to improve the health of the people both in rural and urban areas in India. Further, the availability and accessibility of medical care has also improved substantially across the country. However, in spite of these efforts, India is one of the many developing countries, which have high levels of morbidity. ¹

Population ageing is escorted by the "epidemiological transition" – a shift in the patterns of morbidity and the causes of mortality. India, in the associated

epidemiological transition, is facing a dual burden of communicable and non-communicable diseases where nutrition and other life style factors play important roles.² Further, by constantly altering his environment or ecosystem by such activities as urbanization, industrialization, deforestation, land reclamation, construction of irrigation canals and dams, man has created new health problems for himself.³

However, India has made significant progress in improving the health conditions of its population. There has been a general decrease in mortality leading to significant gains in life expectancy, while what has happened to morbidity is yet to be assessed. Very little information is available about the disease profile of different population groups in India. The level and prevalent pattern of morbidity in the country show that India has entered into the fourth stage of health transition.⁴

Health is a multidimensional concept that is difficult to capture in a single measure. Conventional indicators such as infant mortality rate or life expectancy at birth, anthropometric measures or nutritional status are generally used to measure the health status of the population since they are comparatively simple to analyse and data being easily available. However, in recent times, many studies have used self-reported illness to measure health status because of its consistent relationships with future mortality in many countries and its direct link to policy changes, e.g. those who did not perceive the need would not be seeking health care even though the health care services are fully available. Morbidity, of physical and mental illness, is increasingly being recognized as a measurable indicator of wellbeing. Studies pertaining to reporting of morbidity patterns reveals important facts which informs not only about the health status of various groups but also helps in identifying about type and extent of prevailing morbidities, which provides a vital feedback in setting up priorities in health service reforms.⁶

Keeping the above facts in mind, the following study was undertaken to assess the socio demographic profile as well as pattern of illness among patients attending a tertiary care hospital in rural area of Tamil Nadu.

The objective of the study was to study sociodemographic profile and pattern of illness among patients attending the outpatient department of a Tertiary care hospital.

METHODS

A descriptive study was conducted in the outpatient department of a private tertiary care hospital for duration of 3 months from April to June 2015. This hospital is situated in the rural locality on a National Highway No.45, Maduranthakam taluk, Kanchipuram district, Tamil Nadu nearly 70 kms from Chennai, state capital of Tamil Nadu. Prior permission and ethical clearance for

the study was obtained from concerned authorities. Sampling frame comprised of all patients attending outpatient department of hospital during the study period. Minimum sample size calculated was 712 with an absolute precision of 3% and significance level of 0.05, taking 20% prevalence of respiratory diseases from a previous study done in rural locality of Tamil Nadu.4 Data collection was done with the help of interns for a duration of one week. Systematic sampling technique was used for sample selection and we included every fifth patient attending the hospital. Data on certain selected variables along with the current morbidity was recorded from the patients, with the help of pretested and semi structured questionnaire after taking an informed consent. It was done at the time of registration of the patients in the medical record section of the hospital, before they are being sent to the concerned departments depending on their complaints. In case of children, assent of the child as well as consent from the parents was obtained before proceeding with the data collection. Out of the 1023 questionnaires filled during one week time, 14 were discarded because of their incompleteness and so in the final analysis we had 1009 patients included in our study.

Socio economic status of the patient was classified using updated version of Modified BG Prasad's classification, which is based on per capita monthly income of the family. Occupation of the patients were classified as per the classification recommended in the Kuppuswamy's socio economic status scale. Data thus obtained were entered and analysed using Epiinfo version 3.5.4.

RESULTS

Table 1 depicts the socio demographic profile of the study subjects. It is clearly evident from the table that majority of the patients i.e. 577 (57.2%) in our study were females and male to female ratio was found out to be 1:1.3. With regard to age distribution of the patients, it was found that highest number of patients i.e. 232 (23%) belonged to the age group of 25 - 34 years followed by 191 (18.9%) and 185 (18.3%) patients in the 35 - 44years and 45 - 59 year age group respectively. Least number of patients i.e. 43 (4.3%) in our study belonged to the under 5 years of age. The proportion of elderly patients was found to be 13.8% in our study. Majority i.e. 895 (88.7%) of the patients in our study were from rural locality. An enquiry was made about the marital status of the patients and it was found out that most of the patients i.e. 732 (72.5%) were married. Around 348 (34.5%) of the patients in our study were not literates, around 170 (16.8%) had studied up to primary school and the rest higher than that. More than half of the patients were unemployed and another major portion were employed in unskilled occupations. According to Modified B.G Prasad's classification for socioeconomic status, majority of the patients i.e. 422 (41.8%) belonged to lower middle class and the least number i.e. 53 (5.3%) belonged to upper class.

Figure 1 shows age and gender wise distribution of patients in our study. It is clear from the figure that the proportion of males was higher than females in patients aged less than 15 years as well as in patients aged 60 years and above. On the other hand, female patients outnumbered males in all the other age groups.

Table 1: Distribution of study subjects according to socio-demographic variables.

Socio demographic		No of Patients	Percentage (%)
variable		N	
Gender	Male	432	42.8
	Female	577	57.2
	Under 5	43	4.3
	5 – 14	54	5.4
	15 – 24	165	16.4
	25 – 34	232	23
Age (years)	35 – 44	191	18.9
rige (jears)	45 – 59	185	18.2
	60 and above	139	13.8
	Rural	895	88.7
Residence	Urban	114	11.3
	Married	732	72.5
Marital status	Unmarried	277	27.5
Literacy status	Illiterate	348	34.5
	Literate but below high school	170	16.8
	High school and above	491	48.7
	Profession	42	4.2
	Semi profession	15	1.5
	Clerk, shop owner, farmer	140	13.9
Occupation	Skilled	108	10.7
Occupation	Semiskilled	13	1.3
	Unskilled	158	15.7
	Unemployed*	533	52.8
	Upper	53	5.3
	Upper middle	151	15
Socio	Middle	186	18.4
economic	Lower middle	422	41.8
status	Lower	197	19.5

*includes infants, young children, school children as well as housewives.

Table 2 depicts the most common illnesses/ailments/symptoms reported by the patients. Only the first chief complaint for which they had approached hospital, were considered. Pain abdomen was the most common symptom reported by the majority i.e. 79 (7.82%) followed by knee pain in 62 (6.14%) and cough/cold in 54 (5.35%) of patients in our study.

Table 2: Distribution of study subjects according to their presenting symptoms.

Symptoms	No of patients N (%)
Pain abdomen	79 (7.82)
Knee pain	62 (6.14)
Cold/Cough	54 (5.35)
Headache	41 (4.06)
Generalized body ache	33 (3.27)
Backache	33 (3.27)
Fever	32 (3.17)
Diabetes	29 (2.87)
Giddiness/Weakness	26 (2.57)
Injury	26 (2.57)
Unable to conceive	25 (2.47)
Itching	21 (2.08)
Poor vision	20 (1.98)
Chest pain	19 (1.88)
Thyroid problems	15 (1.48)
Acne	13 (1.28)
Menstrual problems	10 (0.99)
Hypertension	9 (0.89)
Shoulder pain	9 (0.89)
Tooth problems	8 (0.79)

Note: Only the first twenty symptoms reported by majority of patients are presented.

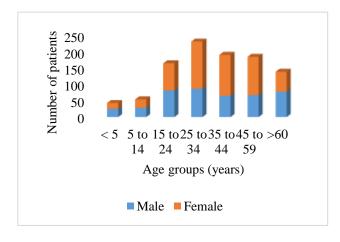
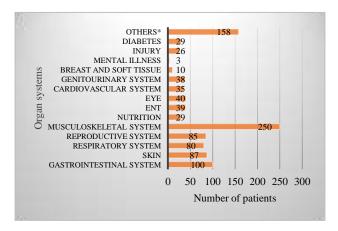


Figure 1: Distribution of study subjects according to age and sex.

Figure 2 shows classification of presenting illness among the patients as per the organ system affected. Diseases of the musculoskeletal system were the most common ailments reported by majority i.e. 250 (24.77%) of the patients in our study. The next organ system affected was gastrointestinal system in 100 (9.91%) of the patients. Diseases of the skin, reproductive system and respiratory system were the third most common illnesses, each presenting in about 8% of the patients.

Table 3 shows the most common presenting complaints by the patients in certain important age groups. Out of the

43 children aged under five in our study, majority i.e. 10 (23.25%) were suffering from cough/cold followed by fever and loose stools in 7 (16.27%) and 3 (6.97%) of children respectively. In children of school age, cough/cold and fever were the most common illnesses in 10 (18.51%) and 5 (9.25%) of study subjects respectively. Among 773 patients in the age group of 15 – 59 years, pain abdomen was the most common presenting complaint followed by knee pain. Out of the 139 geriatric patients reported in our study, majority i.e. 23 (16.54%) were suffering from knee pain followed by generalized body ache and pain abdomen found in 10 (7.19%) and 9 (6.47%) of the subjects respectively.



Others includes patients reporting with dental diseases, neurological diseases, thyroid disorders, general symptoms like fever, headache as well as patients reporting for general health check-up.

Figure 2: Distribution of study subjects according to their organ system affected.

DISCUSSION

In our study, it was found that more than half of the patients were females which is consistent with the findings by other studies. ^{4,9,10} On the contrary, few studies have found the proportion of males to be more than females. 11-13 With regard to age distribution, around 75% of the patients in our study belonged to the 15-59 years age group. These findings are comparable to the findings by other studies where the substantial proportion of patients belonged to the economically productive age group. 10,11,14 Geriatric patients constituted around 13% of total patients in our study which is comparable to study by Gopalakrishnan and Sharma et.al. 4,14 Majority of the patients in our study were from rural locality contrary to findings by Ghosh et al.⁵ This may be due to the fact that our tertiary care hospital was situated in rural locality. More than 70% of the patients in our study were married which confirm to the findings by Maharshi et al. done in Gujarat where the proportion of married patients was around 64%. 11 Proportion of patients who studied high school and above was highest in our study similar to the findings by Maharshi et al. 11 On the contrary, few studies done on the morbidity pattern among elderly people in different parts of the country found out that the proportion of patients who studied below high school was more compared to those who had studied up to high school and above. ^{9,13}

Table 3: Distribution of patients with most common symptoms in different age groups.

Age groups (years)	Symptoms	No of patients n (%)
	Cough/Cold	10 (23.25)
Preschool	Fever	7 (16.27)
children	Loose stools	3 (6.97)
(N=43)	Skin lesions	2 (4.65)
School age	Cough/Cold	10 (18.51)
	Fever	5 (9.25)
	Headache	5 (9.25)
	Pain abdomen	3 (5.55)
children	Wound/Injury,	
(N = 54)	Dental caries,	
(2, 5.)	Scrotal pain,	2 (3.70)*
	Chest pain	
	Pain abdomen	67 (8.66)
Economically	Knee pain	38 (4.91)
productive	Headache	32 (4.13)
age group	Back pain	28 (3.62)
(N=773)	Cough/Cold	26 (3.36)
	Knee pain	23 (16.54)
Geriatric age	Generalized body ache	10 (7.19)
	Pain abdomen	9 (6.47)
group (N = 139)	Cough/Cold	8 (5.75)
(11 – 137)	Weakness	8 (5.75)

Only the symptoms reported by the majority of patients in each age group are presented; *Each symptom is reported by 2 patients.

The most common presenting complaint among the patients in our study was pain abdomen followed by knee pain and cough/cold. Our study findings are consistent with the findings by Khan et al, where the most common symptoms among the patients were related to indigestion/excess gas formation. 12 The pattern of illness among children aged under five and school children was almost similar in our study with cough/cold accounting for illness among the majority followed by fever. Similarly another study found the same pattern of illness among preschool and school children but the most common symptom there was fever followed by respiratory diseases.⁶ The most common morbidity among the elderly in our study was found to be knee pain followed by generalized body ache, consistent with the findings by Bhatt and Jacob et al, Few other authors have found out eye and ocular diseases as the most common morbidity among the elderly, contrary to findings. 9,13,15,16

Nearly one fourth of the patients in our study had an illness affecting the musculoskeletal system of the body.

The next most common organ system affected among patients was gastrointestinal system followed by skin, reproductive and respiratory systems. On the contrary, a study done in a rural locality of Tamil Nadu 4 revealed that the majority of the people had illness affecting the respiratory system followed by 'symptoms & signs', musculo-skeletal system and digestive system in the order of the proportion affected. Data collection for this study was done during a time span of one year covering all seasons which could be the reason for change in morbidity pattern from our study which was exclusively done during summer. Another study done in rural community of North India 6 found out that the most common morbidity were the diseases of the respiratory system followed by diseases of the gastrointestinal system and bone/ joint diseases. This change can be attributed to change in the geographic location of the study population. Again in another study ¹⁰ done in an outpatient department of an urban health center, it was found that respiratory diseases contributed substantially to the illness among the patients followed by hypertension. This study was done in urban locality which might be the reason for change in illness pattern from our study.

The present study was done to study the socio demographic profile and pattern of illness among patients attending a tertiary care hospital in order to identify the current health care needs of the population and thereby recommend appropriate interventions to supplement, strengthen as well as to restructure the existing health care delivery system in the area. One of the major limitations of the study was that the data was collected from only one tertiary care hospital that too during summer season which may give rise to a peculiar pattern of morbidity incidental to the geographic location and season respectively.

CONCLUSION

Majority of the reported patients in our study were females, majority were in the economically productive age group, majority were educated up to high school and above and majority of patients belonged to lower socio economic class. Most common illness among patients in our study was pain abdomen followed by knee pain and cough/cold. The most commonly affected organ systems were musculoskeletal, gastrointestinal and skin, reproductive as well as respiratory system. Cough/cold followed by fever were the most common presenting complaints among preschool as well as school children. Knee pain followed by generalized body aches and pain abdomen were the most common illnesses among the elderly patients.

Recommendations

The study has several implications for health care policy and practice. Reported pattern of diseases especially among different sub groups may be helpful for health planners to frame policies capable of facing future challenges. The present study may also guide health managers in strengthening and remodelling health care facilities in health institutions for attaining better satisfaction levels for both patients as well as health care providers. Further multi-centric studies with wider coverage are desirable for studying disease trends suggesting better planning strategies.

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Institutional Ethics Committee

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