International Journal of Scientific Reports
Islam MS et al. Int J Sci Rep. 2023 May;9(5):145-152
http://www.sci-rep.com
pISSN 2454-2156 | eISSN 2454-2164
DOI: https://dx.doi.org/10.18203/issn.2454-2156.IntJSciRep20231097

Original Research Article

Disease pattern and satisfaction about health care services among patients attending a selected geriatric hospital in Dhaka city

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Received: 25 February 2023
Revised: 18 February 2023
Accepted: 19 March 2023

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ABSTRACT

Background: The proportion of elderly people is increasing at an unprecedented rate globally as well as in Bangladesh. Exploring the current situation it terms of magnitude and pattern of diseases suffered by elderly people would be a good resource for the policy makers in considering health care services and other supports for the elderly.
Methods: A cross sectional descriptive study was done during January 2021 to December 2021 among elderly patients aged 60 years and above. A total of among 203 Patients form both indoor and outdoor department were included. A pretested questionnaire was used to collect the data collection. SPSS V23 software program were using analyzed data.
Results: Among them 98 (48.25%) patients were suffering from communicable disease of which the most common (38.9%) was tuberculosis. On the other hands 201 patients were suffering from non- communicable disease of which the most common was Hypertension (HTN) (73.4%) followed by diabetes mellitus (DM) (36.5%), peptic ulcer (33%) and COPD (31%). The higher educated patients were significantly more dissatisfied compared to lower educated patients about drug dispensing (77.9% vs. 59.6%). Similarly, higher educated patients were significantly more dissatisfied compared to lower educated patients about nursing care (41.3% vs. 26.3%). The patients from urban area were significantly more dissatisfied compared to that of rural area about drug dispensing (76.7% vs. 58.6%).
Conclusions: The study findings reveal that non-communicable diseases are the major bulk of diseases in elderly population in comparison to communicable diseases and HTN, DM, peptic ulcer, COPD were the common non-communicable diseases.

Keywords: Geriatric patient, Health care services, Satisfaction level

INTRODUCTION

Ageing is a universal process and is regarded as a normal biological phenomenon. From the time immemorial people have tried to conquer aging and live a long and healthy life. In this stage, people experience decreased physical strength and deteriorating health conditions with age related disease. All over the world proportion of elderly are increasing where numbers of children are decreasing. Globally, there were 703 million older persons aged 65 or over in 2019.[1] Eastern and South-Eastern Asia was home to the largest number of the world's older population (260 million), followed by Europe and Northern America (over 200 million). Over the next three decades, the global number of older persons is projected to more than double, reaching over 1.5 billion persons in 2050. All regions will see an increase in the size of their older population between 2019 and 2050.[2] The number of older persons is expected to grow fastest in Northern Africa and Western Asia from 29 million in 2019 to 96 million in 2050 (+226 per cent).

The second fastest rise in the number of older persons is foreseen in sub-Saharan Africa (+218 per cent), with an expected growth from 32 million in 2019 to 101 million in 2050. In contrast, the projected increase is relatively small in Australia and New Zealand (+84 per cent) and Europe and Northern America (+48 per cent), regions where the population is already significantly older than in other parts of the world. Among development groups, less developed countries excluding the least developed countries will be home to more than two-thirds of the world's older population (1.1 billion) in 2050.[3] The statistical data of Bangladesh represent the number of aged population has increased from 1.38 million to 7.59 million from the year of 1974-2001.[4] Bangladesh is the seventh largest populated (152.51 million) and most densely (1015 person live per square kilo meters) country.[5] Furthermore, the nuclear family is increasing in Bangladesh day by day and older people left alone living separately from their family and becoming vulnerable. This condition demands more health and welfare services and more provision to the elderly support system.[6,7] Hippocrates (460 BC-377 BC) considered that diet and exercise were the chief factors in living Along and healthy life.[8] The elderly are one of the most vulnerable and high risk group in terms of health status in any society. Evaluation of the morbidity profile will have implications for providing health care for the elderly population and its costs. The health of the aged is a public health issue and needs to be addressed. More than 75% of the elderly people are residing in rural areas; the geriatric health care should be addressed by the primary health care.[9]

Objectives

General objective

General objective was to identify disease pattern and assess satisfaction level regarding health care services among geriatric patients in selected hospital in Dhaka city.

Specific objectives

Specific objectives were to identify the diseases suffered by the patients attending a selected hospital in Dhaka city, to assess their satisfaction level regarding health care services provided to them and to identify their socio-demographic characteristics

METHODS

Study design

A cross sectional study design was chosen for this study.

Study place and population

The study was conducted among the patients attending the institute of geriatric medicine, a hospital in Agargaon, Dhaka run by the Bangladesh association for the aged and institute of geriatric medicine (BAAIGM).

Study duration

From January 2021 to December2021.The study was started with protocol preparation and finished with final report submission.

Sampling technique and sample size

Non probability convenient Sample technique was used for selection of patient as sampling frame could not be prepared.

If we considered simple random sampling technique using the formula $n=Z^2pq/d^2$ and since some studies claim the prevalence of non-communicable diseases as 23% the minimum sample size would 286 (as shown below):[10]

$N=pqz^2/d^2$

Where,

p=23%, q=1-p=77%, z (Standard normal deviate)=1.96 (at 5% error level) and d=absolute error or precision and is equal to 5%.

So, $n=23\times77\times (1.96)^2/(5)^2=272$ and after considering 5% non-response rate, our final sample size was 272/0.95=286.

However, due to time constraint 203 patients were interviewed

Inclusion criteria

Patients with sex: both male and female, age ≥ 60 years and willing to participate were included.

Exclusion criteria

Patients with <60 year age, too ill to participate or unwilling to participate were excluded.

Research instrument and tools

Pretested semi structured questionnaire was used to collect the socio-demographic factors type of disease(s) suffered by. Patient's level of satisfaction about health care services were assessed by asking the level to which they were satisfied with the services provided by the different sections of the hospital by using a four point-Likert Scale questions as follows:

How satisfied are you with services we provide? (Different section were mentioned)-highly dissatisfied=1, dissatisfied=2, satisfied=3 and highly satisfied=4

Data collection procedure

Data were collected through individual face-to-face interview by the researcher himself using a structured, pre-tested questionnaire for socio demographic characteristics, and disease related data were collected through relevant documents such as hospital patient register and prescription of individual patient. The patient's level of satisfaction about health care services was assessed by asking the relevant questions with 4 point-Likert scale.

Data analysis

Data was coded, entered in to computer using computer software SPSS ver 21 and then cleaned and analyzed as per objectives. Descriptive statistics such as frequencies and percentages as well as mean and standard deviation were calculated. Chi-square tests done to explore the association between dependent and relevant independent variables of disease pattern and satisfaction level.

Ethical consideration

Ethical approval was taken from the ethical review committee of the Bangladesh university of health sciences (BUHS). Ethical guidelines of BUHS were followed Informed consent was taken from the participants after explaining the objectives of the study and their autonomy and privacy were maintained, and confidentiality of data was assured Permission from the authority of Bangladesh association for the aged &institute of geriatric medicine (BAAIGM), Agargaon was taken before starting the study.

RESULTS

Socio-demographic characteristics:

In this study, more than (45.3%) of the respondent were within the age group of 66-70 years, among them male (53.2%) were predominant; In terms of education, about 5.9% patients had no formal education. Occupation showed that more than half of respondent were still no job (24.1%) and free business (20.2%). among the respondents the largest Household grouping were 71.4% belong to 5-10 (medium). Family income showed that more than 59.1% of the respondent was family income group were 35000-70000 (Table 1), Distribution of respondents by their marital status shows that 64.5% were married, 30% were widowed and 4.4% were divorced. (Figure 1), among the respondents 57.1% from urban area and rest 42.9%were from rural area (Figure 2).

Satisfaction level of patients about health care services

Among the respondents, majority of the patients was satisfied with hospital services from different sections except drug supply from hospital and drug dispensing where majority were dissatisfied (Figure 3).

Frequency distribution of diseases by gender

Out of 203 respondent, 104 (51.2%) male were suffering from non-communicable disease and 50 (24.7%) were male also suffering from communicable disease (Table 2).

Pattern of communicable disease

Out of 203 respondent, 98 (48.25%) were suffering from communicable diseases, the identified diseases are TB, 79 (38.9%), measles 8 (3.9%) mumps 5 (2.5%) STD, 4 (2%) and chicken pox 2 (1%) from (Table 3).

Non-communicable disease

Out of 203 respondent, 201 (99%) were suffering from suffering from non-communicable disease, among which common sufferings were 149 (73.4%) from HTN, 74 (36.5%) from DM, 67 (33%) from PUD, 63 (31%) from COPD, 18 (8.9%) and suffering from each of asthma, RA and cataract was 5 (2.5%) from (Table 4).

Association between socio demographic characteristics and patient satisfaction level

Table 5 shows that no association was found between educational level and patients' satisfaction about health care services except drug dispensing (p=0.005) and nursing care (p=0.023). The higher educated patients were significantly more dissatisfied compared to lower educated patients about drug dispensing (77.9% vs. 59.6%). Similarly higher educated patients were significantly more dissatisfied compared to lower educated patients about nursing care (41.3% vs. 26.3%) (Table 6). There was no association between residential area and patients' satisfaction about health care services except drug dispensing (p=0.006). Patients from urban area were significantly more dissatisfied compared to that of rural area about drug dispensing (76.7% vs. 58.6%).

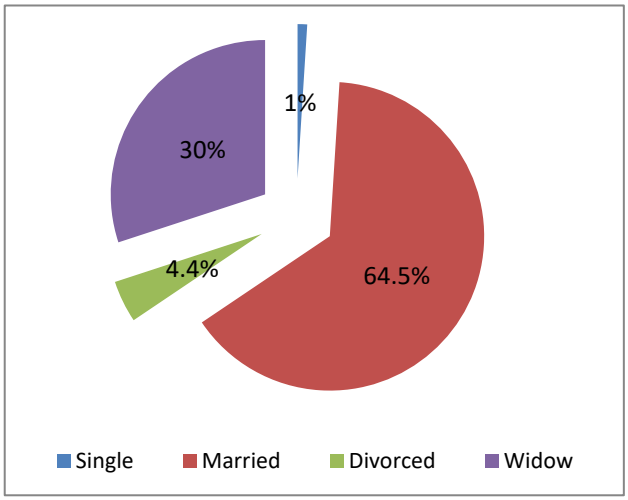

Figure 1: Distribution of the respondents by their marital status, (n=203).

Table 1: Socio-demographic characteristics of the respondents, (n=203).

Variables	N	Percentage (%)
Age (Mean ± SD) (Years)	66.36±3.23	
Age group (Years)		
60-65	90	44.3
66-70	92	45.3
71-77	21	10.3
Gender		
Male	108	53.2
Female	95	47.7
Level of education		
Cannot read or write	12	5.9
Read and write only	28	13.8
Primary school	27	13.3
SSC	32	15.8
HSC and above	104	51.2
Occupation		
Government job	24	11.8
Private job	36	17.7
Free business	41	20.2
No job	49	24.1
Teaching	21	10.3
Farming	30	14.8
Others	2	1.0
House hold size (Mean ± SD)	5.71±1.69	
House hold-size grouping		
2-4 (Small)	57	28.1
5-10 (Medium)	145	71.4
10-12 (Large)	1	0.5
Monthly family income (Mean ± SD)	59059.11±35467.688	
Family income grouping		
15000-30000	36	17.7
35000-70000	120	59.1
75000-100000	36	17.7
120000-300000	11	5.4

Table 2: Identified diseases among the respondents by gender, (n=203).

Diseases	Gender	N	Percentage (%)
Communicable disease	Male	50	24.7
	Female	43	21.1
	Total (Multiple response)	93	45.8
Non-communicable disease	Male	104	51.2
	Female	97	47.8
	Total (Multiple response)	201	99

Table 3: Identified communicable diseases among the respondents by gender, (n=98).

Communicable disease	N	Percentage (%)
Tuberculosis (TB)	79	38.9
Measles	8	3.9
Mumps	5	2.5
Sexually transmitted disease (STD)	4	2.0
Chicken pox	2	1.0
Total (multiple response)	98	48.3

Table 4: Identified non-communicable disease among the respondents, (n=201).

Non communicable disease	N	Percentage (%)
HTN	149	73.4
DM	74	36.5
Peptic ulcer disease	67	33.0
COPD	63	31.0
Ischemic heart disease	23	11.3
Asthma	5	2.5
Rheumatic arthritis	5	2.5
Cataract	5	2.5
Carcinoma of stomach	4	2.0
Dyslipidemia	2	1
Chronic kidney disease	2	1
Stroke	1	0.5
Chronic liver disease	1	0.5
Hearing loss	1	0.5
Pancreatitis	1	0.5
Piles	1	0.5
Urinary tract infection	1	0.5
Total	Multiple response	

Table 5: Level of education and satisfaction status of patients towards different service category of the hospital.

Service category	Level of education	Dissatisfied, n (%)	Satisfied, n (%)	P value
Making appointment for sickness	Below SSC	8 (8.1)	91 (91.9)	0.201
	SSC and above	4 (3.8)	100 (96.2)	
	Total	12 (5.9)	191 (94.1)	
Doctor's time given to the patient	Below SSC	15 (15.2)	84 (84.8)	0.442
	SSC and above	20 (19.2)	84 (80.8)	
	Total	35 (17.2)	168 (82.8)	
Trust in doctor prescription	Below SSC	15 (15.2)	84 (84.8)	0.552
	SSC and above	19 (18.3)	85 (81.7)	
	Total	34 (16.7)	169 (83.3)	
Doctor's communication with patient	Below SSC	20 (20.2)	79 (79.8)	0.511
	SSC and above	25 (24)	79 (76)	
	Total	45 (22.2)	158 (77.8)	
Trust in recommended medical investigation	Below SSC	16 (16.2)	83 (83.8)	0.120
	SSC and above	26 (25)	78 (75)	
	Total	42 (20.7)	161 (79.3)	
Supply of drugs from hospital	Below SSC	64 (64.6)	35 (35.4)	0.16
	SSC and above	83 (79.8)	21 (20.2)	
	Total	147 (72.4)	56 (27.6)	
Drug dispensing	Below SSC	59 (59.6)	40 (40.4)	0.005
	SSC and above	81 (77.9)	23 (22.2)	
	Total	140 (69)	63 (31)	
Nursing care	Below SSC	26 (26.3)	73 (73.7)	0.023
	SSC and above	43 (41.3)	61 (58.7)	
	Total	69 (34)	134 (66)	

Table 6: Residential area and satisfaction status of patients towards different service category of the hospital.

Service category	Residential area	Dissatisfied, n (%)	Satisfied, n (%)	P value
Making appointment for sickness	Rural	6 (6.9)	81 (93.1)	0.606
	Urban	6 (5.2)	110 (94.8)	
	Total	12 (5.9)	191 (94.1)	
Doctor's time given to the patient	Rural	15 (17.2)	72 (82.8)	1.000
	Urban	20 (17.2)	96 (82.8)	
	Total	35 (17.2)	168 (82.8)	

Continued.

Service category	Residential area	Dissatisfied, n (%)	Satisfied, n (%)	P value
Trust in doctor prescription	Rural	16 (18.4)	71 (81.6)	0.587
	Urban	18 (15.5)	98 (84.5)	
	Total	34 (16.7)	169 (83.3)	
Doctor's communication with patient	Rural	19 (21.8)	68 (78.2)	0.922
	Urban	26 (22.4)	90 (77)	
	Total	45 (22.2)	158 (77.8)	
Trust in recommended medical investigation	Rural	18 (20.7)	69 (79.3)	1.000
	Urban	42 (20.7)	92 (79.3)	
	Total	42 (20.7)	161 (79.3)	
Supply of drugs from hospital	Rural	58 (66.7)	29 (33.3)	0.113
	Urban	89 (76.7)	27 (23.3)	
	Total	147 (72.4)	56 (27.6)	
Drug dispensing	Rural	51 (58.6)	36 (41.4)	0.006
	Urban	89 (76.7)	27 (23.3)	
	Total	140 (69)	63 (31)	
Nursing care	Rural	28 (32.2)	59 (67.8)	0.638
	Urban	41 (35.3)	75 (64.7)	
Total		69 (34)	134 (66)	

Results were expressed as number (%), $\chi 2$ was performed and $p<0.05$ was level of significance.

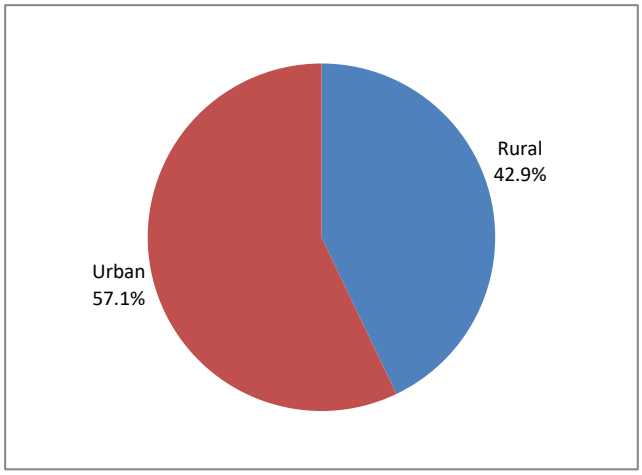

Figure 2: Distribution of the respondents by residential area, (n=203).

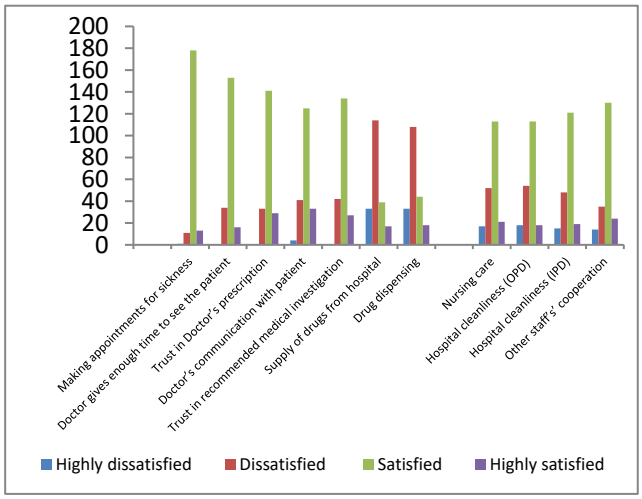

Figure 3: Distribution of respondents according to their satisfaction level about health care service.

DISCUSSION

In the present study majority (77.8%) of the elderly were found in the age group 60-69 years. In a similar type of study to assess the morbidity pattern among elderly patients in South India also found majority (59.6%) in the age group of 60-69 years though this (latter) proportion is comparatively lower than the present study which might be due to variation in local demographic factors, disease burden or health care service facilities. In the present study there were more male (53.2%) than female (46.8%). In the previously mentioned study conducted in South India also showed more male participants (57.6%) than female (42.4%).[10]

Among the study participants of the present study30% were widowed which very much similar to a study conducted in Nepal which found 30.7% of the elderly were widowed.[11]

Only 5.9% participants of the present study were non-educated while a study in Nepal found it 60% (33); this scenario reflects the higher literacy rate in Bangladesh compared to Nepal.[12]

However, residential area distribution of the respondents in the present study (57.1% urban vs. 42.9% rural) is similar to that (57% from Kathmanduvs. The 43% from outside Kathmandu) found in another study conducted to explore the disease pattern among elderly people in Tribhuvan university teaching hospital, Nepal.[13]

Morbidity pattern among the elderly patient in the rural area of Pondicherry: a cross sectional study showed that 83.8% Majority of the elderly had a personal income of around Rs 500-1000. The 17 subjects had no income of any kind.[14] In this study showed that 59.1% of elderly patient had personal income around 35000-70000 taka.

Out of 203 respondent, 93 (45.8%) were suffering from communicable diseases and the most common disease was TB, 79 (38.9%). The higher number of TB patients might be due to presence of TB treatment center in the hospital. Others identified diseases were measles 8 (3.9%) mumps 5 (2.5%) STD4 (2%) and chicken pox 2 (1%). Among the participants a total of 201 (99%) persons were suffering either one or more non-communicable disease. The most common n sufferings were HTN 149 (73.4%), DM 74 (36.5%), PUD 67 (33%), COPD 63 (31%) and others were BEP18, DUB 17, inguinal hernia 14, uterine prolapsed 9, and suffering from each of asthma, RA and cataract was 5.

This study showed that non-communicable disease burden was more responsible for admission or outdoor treatment of elderly patient as compared communicable disease. However, there was an opposite trend in a study done in Nigeria where communicable disease was the most common disease burden among the elderly population.[15]

This study showed that 38.9% TB and 73.4% Hypertension was the most common morbidity among communicable and non-communicable disease respectively. However, result in study done in Tamil Nadu India showed that joint pain 43.4% and chronic cough 11.3% was the most common morbidity among communicable and non-communicable disease respectively.[16] In another study done in western Australia cardiovascular disease and cancer accounted for maximum disease burden among both male and female geriatric population.[17] In the present study DM (36.5%), PUD (33%) and IHD (11.3%) caused highest morbidity for both genders.

The findings of this study indicated that a greater percentage (55.7%) of the participants was satisfied with the quality of nursing care. Gani et al from Ghana reported 72.3% patient were moderately satisfied with quality of nursing care.[18]

Limitations

This study has certain limitations which are mentioned below: The sample size was small which does not represent the study population properly. This study was conducted in a specific hospital in Dhaka, so findings cannot be generalized.

CONCLUSION

This study was of a cross sectional in nature and shows that majority of elderly were in among 98 (48.25%) patients were suffering from communicable disease of which 38.9% TB was the most common 79 persons. On the other hands 201 patients were suffering from non-communicable disease of which 73.4% HTN, 36.5% DM, 33% peptic ulcer and 31% COPD were the common diseases. Majority of the patients were satisfied with hospital services from different sections except drug supply from hospital and drug dispensing where majority were dissatisfied. The higher educated patients were significantly more dissatisfied compared to lower educated patients about drug dispensing (77.9% vs. 59.6%). Similarly higher educated patients were significantly more dissatisfied compared to lower educated patients about nursing care (41.3% vs. 26.3%). The patients from urban area were significantly more dissatisfied compared to that of rural area about drug dispensing (76.7% vs. 58.6%).

ACKNOWLEDGEMENTS

Author would like to thanks to participants involved in the study. Also, grateful to prof. his generous support in carefully reading my paper and giving many practical suggestions for the completion of this research.

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: Islam MS, Rahman MM, Gupta PKS, Mithila TT. Disease pattern and satisfaction about health care services among patients attending a selected geriatric hospital in Dhaka city. Int J Sci Rep 2023;9(5):145-52.