MORBIDITY PATTERN AND HEALTH-SEEKING BEHAVIOUR AMONG THE SENIOR CITIZENS IN SELECTED RURAL AREAS OF BANGLADESH

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Abstract

Background: The purpose of this study was to determine the morbidity pattern and health seeking behaviour among the rural elderly population.

Methods: This cross sectional study was conducted in six villages of Telihati union of Gazipur District from February to June 2013. Purposive sampling technique was used to collected data from 249 respondents, aged 60 years and above.

Results: The mean age of the respondents was 64.2 (SD±5.6) years. About 70.3% of the respondents were male, majority (47%) respondents were illiterate, 33.3% earned less then ten thousand taka per month. About half (58.2%) of the elderly were still working, among the currently not working respondents majority (49%) were totally dependent. and only 52.6% respondents belonged to joint family. Almost all (98.8%) the respondents had some health problems; among these eye problems (81.7%), musculo-skeletal disorders (66.3%), gastrointestinal disorders (52.4%) and sleeping problems (50.4%) were predominant. Females suffered more from eye problems, musculoskeletal disorder, gastrointestinal disorder and sleeping problems. On the other hand, males suffered more from respiratory and genitor-urinary problems. About 61% have a Government hospital or Community clinic nearby their residence, 70 % were satisfied with available health care facilities and 72% was satisfied with treating doctors even then a greater part (35%) was irregular for check-up. Majority (73.5%) was regular about taking treatment, among the irregulars majority (77.3%) was for un-affordability of medicine. Only 53% of the elderly knew names of some old age diseases.

Key words: Morbidity pattern, health-seeking behavior, senior citizens.

Introduction:
The proportion of older persons has been raising steadily, from 7 per cent in 1950 to 11 per cent in 2007, it is projected that, by 2020, there will be one billion elderly persons (>65 years) in the world, 71% of whom will live in low-income countries.¹ The number of elderly persons in Bangladesh was projected to double from 7.8 million in 2001 to 16.2 million by 2025.² The country is currently undergoing both epidemiologic and demographic transitions, where the decline in both fertility and mortality rates in early life have resulted in increased life expectancy. According to the estimation of the United Nations, life expectancy at birth is expected to increase to 74 years in 2025.³ Based on data from Bangladesh, life expectancy at birth is expected to be 76.9 years for men and 85.1 years for women in 2015, calculated based on the scientific report of ICDDR, B.⁴ Chronic health conditions are common in elderly persons, and the prevalence of multiple chronic conditions is expected to increase.⁵ Chronic diseases, by nature, will accumulate with ageing and present as multiple morbidities. Numerous studies have examined the distribution of multimorbidity among older persons in developed nations,⁶ but literature is scanty on multimorbidity among the elderly people in developing countries. In India, Joshi reported in 2003 that 83% of the elderly people had more than three morbidities.⁷ Research showed that average number of morbidities per person was 2.77 among the elderly people of rural India.⁷ In China, 21.7% of rural elderly people have at least two morbidities, and 15.9%

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have three or more morbidities.\textsuperscript{8} Little is
known about the prevalence of morbidity among
elderly persons in rural Bangladesh. Also, there
is scanty information on the distribution of
chronic conditions and multimorbidity by
socioeconomic status.\textsuperscript{9} The health and
diseases of the elderly also requires attention
by socioeconomic status. Health inequality by
socioeconomic status present in both high-
income and low-income countries.\textsuperscript{10} People
with low socioeconomic status suffer from more
diseases than those with higher socioeconomic
status throughout their life span. As newborns,
they suffer from health problems, such as
premature birth, low birth weight and later on
from chronic diseases, such as diabetes or
heart disease. They also suffer from infectious
diseases or disabilities, such as blindness. In
short, the poor people suffer from more ill-
health and die at a younger age compared to
their better-off counterparts.\textsuperscript{10} The main
purpose of this study was to determine the
morbidity pattern and health seeking
behaviour among the elderly people in rural
Bangladesh.

**Methods:**
A cross-sectional study of morbidity pattern and
health seeking behaviour of geriatric
population in the rural area of Gazipur District,
was planned in the field practice area of
Department of Community Medicine, Dhaka
Medical College, Dhaka. All elderly persons in
the age group of 60 years and above were
included in the study and after following
inclusion and exclusion criteria data was
collected from 249 individuals. The study was
conducted from February to June
2013. Purposive sampling technique was
followed. Data was collected by a pre-tested
semi-structured questionnaire through face to
face interview and limited physical
examination by the fourth year MBBS students.
Semi-structured Interview schedule contained
two major sections. Section- A contained socio
demographic part and section- B contained
morbidity pattern and health seeking
behaviour of the elderly population of some
selected villages of Gazipur District. Clinical
examination included a general physical
examination. Height and Weight were taken,
blood pressure measured, and if high BP
detected in 1st instance, two more readings
were taken on different occasions to confirm
hypertension. The purpose of the study was
explained and confidentiality of the information
was assured. Data were presented with mean
and standard deviation for continuous variable
and categorical variables were compared by chi-
square statistics. Data were analyzed by using
the SPSS version 17.0.

**Results**
Old age characterized by declining physical
capacities, is usually associated with many
diseases. For the purpose of the study, the
health status and health seeking behaviour of
the respondents was ascertained by asking
questions about the extent of loss of vision,
hearing and other health problems faced by
them and the available healthcare facilities
nearby, also about their attitude of taking the
services. Table -I shows that a major fraction
of the population was in the age group of 60-64
years old, while a small fraction (6.5 %) were
75 years old or older. Males (70.3 %) were more
than the females. All most all respondents were
(99.6 %) were Muslims. This reflects the true
picture of the population based on religion at
the local and national level. A joint family
system was seen to be the most common (52.6
%) among the population interviewed followed
by the nuclear family. Literacy was found to be
low in the study population, majority (47.4 %)
were illiterate. Among the currently not
working respondents, majority (78.8 %were
totally dependent, about 12.5 % were partially
dependent and rest 8.7 % were totally
independent. Chi-sq. test among gender and
economic condition was significant (p=.030)
Among 249 elderly respondents, 35.7 % were
tobacco smokers, among them almost all (95.4
%) were male and 64.3 % were non-smokers
among them majority were females. Chi-sq.
test among gender and current tobacco
smoking habit was highly significant (p<.001).
Among 249 respondents 62.7 % were current
tobacco chewers and 37.3 % non tobacco
chewer.
Almost all (98.8 %) respondents reported having illness. It is evident from Fig: I that the health status of women is poor compared to that of men. The majority (81.7 %) of the respondents had Eye problem, among them majority were female. About 26.4 % of the respondents had hearing problems. However, more number of women compared to men reported difficulty in hearing. Other morbidities such as musculo-skeletal disorders (66.3 %), gastrointestinal disorder (18.3 %), diabetes mellitus (19.5 %), sleeping problems (50.4%) dermatological problems (29.3 %) were also more common among women. On the other hand, problems such as respiratory problems and genitourinary problems are prevalent more in males. But oral lesions, tuberculosis and cancers were found equally distributed.

Majority (70.3%) of the respondents was satisfied and with available health care facilities. Table-2 showed that 70.3% respondents can do their daily activities without any difficulty, among them majority were male. 25.7% can do with difficulty and majority is female and only 4% cannot do without help, again females are more. Significant association was found (p=0.038).

Fig: II shows that majority (42.6 %) of them have a Government hospital, Community clinic (18%), private practitioner (15 %) available nearby their residence. Distribution of the respondents by frequency of check-up showed

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**Table-I**

Socio-demographic profile of the study population

<table>
<thead>
<tr>
<th>Variable</th>
<th>Male (%)</th>
<th>Female (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age group (years)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-64 yrs.</td>
<td>107 (61.1)</td>
<td>43 (58.1)</td>
<td>150 (60.2)</td>
</tr>
<tr>
<td>65-69 yrs.</td>
<td>45 (25.7)</td>
<td>15 (20.3)</td>
<td>60 (24.1)</td>
</tr>
<tr>
<td>70-74 yrs.</td>
<td>13 (7.4)</td>
<td>10 (13.5)</td>
<td>23 (9.2)</td>
</tr>
<tr>
<td>&gt; 75 yrs</td>
<td>10 (5.8)</td>
<td>6 (8.1)</td>
<td>16 (6.5)</td>
</tr>
<tr>
<td>Gender</td>
<td>175(70.3)</td>
<td>74 (29.7)</td>
<td>249 (100.0)</td>
</tr>
<tr>
<td>Religion</td>
<td>174 (69.9)</td>
<td>75 (30.1)</td>
<td>248 (99.6)</td>
</tr>
<tr>
<td>Islam</td>
<td>1 (0.4)</td>
<td>0</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>Hinduism</td>
<td>1 (0.4)</td>
<td>0</td>
<td>1 (0.4)</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illiterate</td>
<td>74 (42.3)</td>
<td>44 (59.5)</td>
<td>118 (47.4)</td>
</tr>
<tr>
<td>Informal</td>
<td>19 (10.9)</td>
<td>11 (14.9)</td>
<td>30 (12.0)</td>
</tr>
<tr>
<td>Formal</td>
<td>82 (46.9)</td>
<td>19 (25.7)</td>
<td>101 (40.6)</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work</td>
<td>130 (74.3)</td>
<td>15 (20.3)</td>
<td>145 (58.2)</td>
</tr>
<tr>
<td>Do not work</td>
<td>45 (25.7)</td>
<td>59 (79.7)</td>
<td>104 (41.8)</td>
</tr>
<tr>
<td>Economic condition</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totally dependent</td>
<td>31 (68.9)</td>
<td>51 (86.4)</td>
<td>82 (78.8)</td>
</tr>
<tr>
<td>Partially dependent</td>
<td>10 (22.2)</td>
<td>3 (5.1)</td>
<td>13 (12.5)</td>
</tr>
<tr>
<td>Totally independent</td>
<td>4 (8.9)</td>
<td>5 (8.5)</td>
<td>9 (8.7)</td>
</tr>
<tr>
<td>Family type</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nuclear family</td>
<td>86 (49.1)</td>
<td>32 (43.2)</td>
<td>118 (47.4)</td>
</tr>
<tr>
<td>Joint family</td>
<td>89 (50.9)</td>
<td>42 (56.8)</td>
<td>131 (52.6)</td>
</tr>
</tbody>
</table>
that majority (35%) was irregular, 25% had checkup once in a year, and almost 19% did once in six months. Majority (72%) was satisfied with treating doctors and only 28% were not satisfied. About the regularity of taking prescribed treatment only 26.5% were irregular. The reasons for irregularity of taking prescribed treatment showed majority (77.3%) said medicines are expensive, about 11% said they don’t get them nearby, 9% considered them unnecessary. Distribution of the respondents by place of treatment for illness showed that majority (31 percent) preferred to go to Govt. hospitals, 27% to Private Practitioners and 21% to pharmacy nearby.

Fig: III shows distribution of respondents by reasons for not being satisfied with health services, majority said medicine are expensive (23%), health care services are far away (20.3%), service providers not available (20.9%), etc.

Discussion:

This study was done to find out the morbidity pattern and health seeking behaviour among the 249 senior citizens from Telihati union of Gazipur district. More than half of the respondents were from Mulaid and Tepirbari villages. Their mean age was 64.2 (SD±5.6) years. Nearly two thirds belonged to 60-64 years age group. Almost three fourths of the respondents were male and majority was currently married. These findings do not accord with national statistics, as most of the data were collected from streets, shops and mosques etc. so there could be the predominance of male, young old senior citizens.

Almost half of the respondents were illiterate, and more than half of the elderly were still at work. Among the currently not working respondents, majority were economically totally dependent on their family. About one third earned five to ten thousand taka per month. These findings accords with our national statistics. Half of the respondents belonged to joint family, having 4-6 family members. These findings accords with national statistics, where our average family member is seven.

<table>
<thead>
<tr>
<th>Perform Daily Activities</th>
<th>Gender</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male (%)</td>
<td>Female (%)</td>
<td>Total</td>
</tr>
<tr>
<td>Can do without any difficulty</td>
<td>131 (74.9)</td>
<td>44 (59.4)</td>
</tr>
<tr>
<td>Can do with difficulty</td>
<td>37 (21.1)</td>
<td>27 (36.5)</td>
</tr>
<tr>
<td>Cannot do without help</td>
<td>7 (4.0)</td>
<td>3 (4.1)</td>
</tr>
<tr>
<td>Total</td>
<td>175 (100.0)</td>
<td>74 (100.0)</td>
</tr>
</tbody>
</table>

*(\(\chi^2 = 6.519, \text{df}=2, \ p=0.038\))
Among all the respondents, about one third was tobacco smokers; among them almost all were male. Out of which one fourth had been smoking tobacco for 31-40 years. Bangladesh is a conservative country where open smoking is still not appreciated for male and women who smokes never admits it in public. More than half of the respondents were current tobacco chewers among them one third had been chewing tobacco for 11-20 years. Not only in Bangladesh, but tobacco chewing is more prevalent in this subcontinent, so as oral cancer. The primary cause of very high incidence of oral cancer in South Asia is the widespread habit of chewing betel quid (or paan) and related areca nut use. Almost all (98.8%) had one or more health problems. Gender wise differences were found in the health status of the elderly respondents. Compared to men, the health status of women was found to be poorer. This might be due to under nourishment associated with cultural practices in Bangladesh especially in rural areas. Women in rural areas, generally take meals only after their husbands and children have had their food. They contend with whatever that was left, which most of the time would not be sufficient diet for them. Moreover, the diseases specific to women and other natural biological processes, which the women may undergo, could be some of the reasons for the overall low health status of women.

In our study, the common morbidities found were eye problems, hearing problem, musculoskeletal disorder, cerebrovascular disorder, gastrointestinal disorder, diabetes, dermatological problem and sleeping problems were more common among females. On the other hand, problems such as respiratory and genitor-urinary were more prevalent in males. But oral lesions, tuberculosis and cancers were equally distributed. This study also accords with Manandhar et al. study, where they found 43% diabetic, 47.7% hypertensive, and 68.2% visually impaired; all these were higher in the 70–79 years age group.

In a study on the aged population in a rural area of Wardha district reported that the common morbidities were cataract (30%), arthritis and arthralgia (15.6%), refractory error (13.6%), anemia (13.3%), chronic bronchitis (7.3%), dental caries (7%), hypertension (5.2%), which increased with increasing age to a maximum above the age of 65 years. A study from rural area of Rohtak district of Haryana, reported that the leading symptoms among the male elderly were visual impairment (65%). In South Korea, life style-related diseases, including hypertension, arthritis, diabetes mellitus and osteoporosis, were the most common morbidities; most prevalent was hypertension (37.5%), followed by diabetes mellitus (14.9%). Experiences from geriatric clinics in Northern India revealed that hypertension was the most commonly reported physical diagnosis (50%); other specific medical illnesses were osteoarthritis (15%), diabetes (13%) and constipation (8%).

Our study result accords with Khanam et al. study, where they found morbidities was significantly higher among women, illiterates, persons who were single, and having low family income. This study also accords with Jabeen et al., where they found morbidity pattern of the elderly respondents attending BAAIGM were, arthritis (27.9%), heart disease (17.1%), chronic bronchitis (16.2%), diabetes (14.4%), peptic ulcer diseases (11.7%) and rest urogenital and other diseases (12.7%). Knowledge about old age diseases were limited to diabetes (57.9%), high blood pressure (53.3%), heart diseases (50.4%), respiratory diseases (31.8%), and orthopaedic diseases (3.7%), and 41.1% had no knowledge about old aged diseases.

About two thirds of the respondents have Government health care facilities nearby rest one third have private practitioner nearby their residence. But their frequency of check-up showed that majority was irregular, even they were satisfied with their doctors. This result accords with Jabeen et al., study, where they found most of the respondents (81.7%) were not regular in health check-ups. Two thirds of them were regular in taking prescribed treatment; the rest one third was irregular due
to the expense and unavailability of the drugs. Narapureddy et al., 17 studied among the 411 elderly persons on their health seeking behaviour, they found 45.7% sought treatment from private practitioner and private hospital, 32.3% from non registered practitioner (Quack), only 18.9% sought treatment from Government hospital and remaining 3.1% used home remedies or sought help from traditional healers.

About 88.4% elderly performed physical activity, among them majority were male. With regard to the performance of day-to-day activities relating to personal care, dressing etc, it was reported that more male compared to female could able to perform these tasks without others help. Walking was under taken by 217(67%) as a physical exercise. 18

Half of the respondents were familiar with old age diseases, majority knew about CVDs, diabetes, respiratory diseases and cataracts. This result accords with Jabeen et al., study, 16 where they found only 51.4% respondents could name some common geriatric diseases. Anemia was found among less then half of the respondents, where majority were female. Anemia was absent among majority of the males. Our study result does not similar with Manandhar et al. study 12, where they found 86% respondents were anemic.

About one third of the respondents had SBP between 120-129mmHg, only 10% have above 150 mm Hg. Almost all had DBP below 90 mmHg and only 3 of them had e”95mmHg. Wilking et al. observed that the prevalence of isolated systolic hypertension appeared to be greater for women than for men; whereas the WHO reports a common prevalence of 56%. 19

Previous researchers in India reported a lesser magnitude of hypertension that ranged from 5.2 to 16.5%. 13 Anil Purty et al. reported 25.9% hypertension among the geriatric population. 20

Majority (48%) of the respondents had normal BMI, about 28% were underweight, and 14% were pre-obese and only 2% were grade 2 obese. Respondent’s mean BMI was 22.50 (SD±3.6). About 50% of the population had BMI < 18.5. MNA revealed a prevalence of 26% for protein-energy malnutrition and 62% for risk of malnutrition. 21

These findings highlight the needs for their periodic medical examination and treatment at the primary care level, which will help prevent further deterioration of their health status. Remarkable emphasis should be given to the health status of poor elderly women residing in rural areas of Bangladesh.

**Conclusion:**
The study has shown that the prevalence of morbidity is higher in rural areas of Gazipur district, especially among the elderly women. Emphasis should be given to the certain common specific factors that influence the health status among the elderly belonging to gender wise distribution. Hence, these findings raise a number of issues for formulating appropriate health policies for the elderly. There should be separate geriatric clinics in both private as well as government hospitals to deal with the problems faced by the elderly. Further studies in large scales are needed to explore the morbidity and health seeking behaviour of senior citizen of Bangladesh.

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