



Disease Pattern of Geriatric People of the Host Community in Cox's Bazar, Bangladesh

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ABSTRACT

Introduction: Diseases of elder people are a global problem. The prevalence of disease in elderly people is increasing day by day as old people often have limited regenerative abilities and are more susceptible to disease, syndromes, injuries, and sickness than younger adults.

Objective: This study was conducted to identify the disease pattern of geriatric people of the host community in Cox's Bazar, Bangladesh.

Method: A descriptive type of cross-sectional study was conducted among 381 geriatric persons in 5 selected hospitals of Cox's Bazar. The sample size was calculated in a 95% confidence interval and with a 5% level of significance. Data collection was done by using a semi-structured pre-tested questionnaire. Data quality was ensured through multiple procedures of review and cross-checking.

Results: The findings revealed that a total of 32.0% had heart disease and 31% had arthritis. More than one-fifth (22.0%) of the respondents had diabetes and 18% of the total respondents had different types of communicable diseases. The occurrence of non-communicable diseases in geriatric people is significantly associated with their age and sex.

Conclusion: The findings from this study illustrate that non-communicable disease is very much prevalent among the geriatric population as well as a threat to public health. The hospitals and health service providers should emphasize the management and prevention of these diseases. Also, lifestyle modification can play a vital role in preventing non-communicable diseases.

Keywords:

Disease Pattern, Geriatric People, Host Community, Cox's Bazar, Bangladesh

Introduction

Aging is a continuous process starting from childhood and continued to maturation through puberty, young adulthood and then a declination occurs through middle and later age [1]. The world is on the brink of revolution; most countries around the world are facing an aging population that is leading to an increase in the number of older adults. According to the report of the United Nations, more than 700 million people worldwide are estimated to be 65 years of age or older, making up about 9% of the world's population [2]. World Population Prospects: the 2019 [3] Revision says one in six people in the world will be over age 65 (16%), up from one in 11 in 2019 (9%). One in four persons living in Europe and Northern America could be aged 65 or over by 2050. For the first time in history, persons aged 65 or above outnumbered children under five years of age globally in 2018. By 2050, the number of persons aged 80 years or over is projected to triple, from 143 million in 2019 to 426 million. The number of old age people (aged more than

60 years) is increasing and in last 50 years, the number has been tripled which may be increased three times within next 30 to 40 years [4]. The world's population is aging and with it the prevalence of chronic diseases, especially cardiovascular diseases and cancer, increases. A long-lasting life is envisaged without the burden of disease [5]. Multi-morbidity is high among the number of people living, and in the last decades the prevalence has increased notably in high-income countries [6] multi-morbidity is defined as the combination of two or more chronic conditions in a person [7]. The report says that patients with multi-morbidity led to lower quality of life, major mental symptoms, and experience more crumble care [8]. Patients with multi-morbidity demand an extensive care approach and treatments may depend on the specific mix of diseases. There has been more interest in multi-morbidity by the researcher, healthcare professionals, and policymakers during the last two decades. Studies estimate a prevalence of multi-morbidity of at least 50% in the elderly population, which even ranges up to 99% in the primary care population aged 80 years and older [9-12]. Several factors are contributing to the morbidity and mortality for elderly people: age-related reduced physiologic reserve capacity, decreased host resistance, chronic underlying

diseases, delays in diagnosis and therapy, poor tolerance to invasive diagnostic and therapeutic procedures, delayed or poor response to therapy, and other related causes [13]. One of the biggest social changes brought about by improved standards of living is population aging. By 2050, older people will outnumber children under the age of 14 years [14-16]. This increase in life expectancy is influenced by heredity and lifestyle, smoking, eating patterns, exposure to environmental risk factors [1]. Due to an increase in life expectancy and exposure to risk factors for a lifetime, elderly people are experiencing a greater burden of chronic and non-communicable disease. Non-communicable diseases are affected by multifaceted factors e.g., heredity, environmental, physiological, and behavioral, and some non-communicable disease can affect healthy adults like cardiovascular diseases (heart attacks and stroke); different types of cancer; chronic respiratory diseases (such as chronic obstructive pulmonary disease and asthma); and diabetes [17]. The world is shifting towards an older population and Bangladesh is not out of this lead [18]. According to the Bangladesh population census 2011 [19], 4.4 % of women and 5.1% of men are 65 years or above. But according to the Bangladesh Bureau of Statistics 2018 [20], the projected population for Bangladesh will be 223.3 million where the 65 years and above population will be 19.1% women and 15.7 % will be men. So, there is a drastic increase in the number of old age people. Bangladesh has seen a significant increase in life expectancy at birth. According to Report on Sample Vital Registration System (SVRS) 2020 of the Bangladesh Bureau of Statistics [21], the average life expectancy at birth is 72.8 years, for men 71.2 years and women 74.5 years. This increase in life expectancy has come with several associated problems such as lack of sufficient income, employment opportunities, malnutrition, chronic diseases, absence of proper health care facilities, and lack of adequate family support. Furthermore, problems of elderly people in our country vary according to their socioeconomic status and residence. The study intends to discover the occurrence of disease patterns among the geriatric people in the host community people in

Cox's Bazar, Bangladesh.

Methodology

This study was a descriptive type of cross-sectional study. The study was conducted in 2 selected public hospitals and 3 selected private hospitals of Cox's Bazar district. The total study period was six months. The study population was all the geriatric people who had visited the selected hospitals for treatment purposes. The sample size was 381 which was calculated by using the standard statistical formula ($n = z^2pq/d^2$). The sample size was calculated in a 95% confidence interval and with 5% level of significance. A total of 381 geriatric persons aged more than 60 years and permanent residents of Cox's Bazar were selected randomly for this study. The persons who were severely ill physically or mentally were excluded from the study. Face-to-face interview was conducted for the data collection. Data collection was done by using a semi-structured pre-tested questionnaire. Data quality was ensured through multiple procedures of review and cross-checking. Data entry was done concurrently with data collection. Data analysis was done by using the Statistical Package of Social Science (SPSS-version 20). Before collecting the data, the study protocol was submitted to the research ethics review committee of Faculty of Allied Health Sciences of Daffodil International University for approval. The study objective, procedure, risks, and benefits of the study were explained to the respondents in an easily understandable local language and then informed consent was taken from each participant. Anonymity and confidentiality of information were maintained strictly.

Results

The study findings show that most of the respondents (43.0%) were aged between 60 to 64 years, nearly two-thirds (61.0%) of the respondents were male. Among 149 female respondents, 122 were housewives, 12.0% of total respondents were retired and 16.0% of respondents were involved in the business (Table 1).

Table 1: Socio-demographic information of the respondents (n=381).

Socio-demographic characteristics	No. of respondents	Percentage (%)
Age group		
60-64	164	43
65-69	103	27
70-74	76	20
75-79	19	5
80 and above	19	5
Sex		
Male	232	61
Female	149	39
Occupation		
Retired	46	12
Housewife	122	32
Service	27	7
Business	61	16
Others	126	33

According to the self-reported health status of the respondents, 23.0% respondents said that their health status is good whereas 30.0% reported their overall health status bad. Among all the respondents, 32.0% had heart disease and 31% had arthritis.

More than one-fifth (22.0%) of the respondents had diabetes and 18% of the total respondents had different types of communicable diseases (Table 2).

Table 2: Health status and morbidity related information of the respondents (n=381).

Variables	No. of respondents	Percentage (%)
Self-reported health status of the respondents		
Good	88	23
Moderate	179	47
Bad	114	30
Presence of disease among the respondents (Multiple responses)		
Diabetes	85	22
Asthma	62	16
Peptic Ulcer	39	10
Arthritis	118	31
Heart disease	121	32
Other types of non-communicable diseases	154	40
Communicable disease	69	18

Discussion

According to the respondent's disease status compared to their socio-demographic characteristics, the occurrence of non-communicable diseases is significant (p-value <0.05)

compared to communicable diseases according to age group. The occurrence of non-communicable diseases is also found to be significant sex-wise although no significance was found occupation-wise from the data (Table 3).

Table 3: Association between the respondent's diseases with their socio-demographic characteristics.

Socio-demographic characteristics	Disease of the respondents							P-value
	Non-communicable disease						Communicable disease (69)	
	Diabetes (85)	Asthma (62)	Peptic Ulcer (39)	Arthritis (118)	Heart disease (121)	Other types of NCD (154)		
Age group								
60-64 (164)	34	26	15	82	36	64	25	0.024
65-69 (103)	24	21	11	25	56	52	19	
70-74 (76)	21	12	8	8	16	27	10	
75-79 (19)	3	2	3	2	10	8	9	
>80 (19)	3	1	2	1	3	3	6	
Sex								
Male (232)	59	39	24	71	78	87	41	0.004
Female (149)	26	23	15	47	43	67	28	
Occupation								
Retired (46)	12	8	5	14	15	18	9	0.059
Housewife (122)	24	19	11	37	39	54	21	
Service (27)	7	5	3	9	9	2	7	
Business (61)	14	9	6	16	18	19	12	
Others (126)	28	21	14	42	40	61	20	

The findings from this study indicate that the morbidity among elderly people rises with their age. Similar finding is reported in the study of Ferrucci et al, [22]. Elder people should therefore be given priority as they are at risk of various diseases and

disabilities. This study's findings reveal that most of the respondents were suffering from heart disease. The finding is very much similar to other studies which were done in Nepal and other countries. Shankar et al mentioned in a study from

Western Nepal that hypertension is the most common condition in geriatric patients [23]. Similar types of findings were found in a study of Bangladesh conducted by Hosain and Begum [24]. According to the findings, the prevalence of diabetes is higher among the male respondents which are found significant. In a community-based study in Nepal, Shrestha et al revealed that the prevalence of diabetes is higher among the older male [25]. A high number of respondents found in the intended age categories are showing similarity with increased life expectancy results published by the Bangladesh Bureau of Statistics and world aging trends. Although 47% of respondents are claiming their health status is moderate, but there is a presence of multiple responses in non-communicable diseases. This study's

findings are similar to the findings of a study conducted in a rural setting in Bangladesh showing multimorbidity of 53% [26]. The prevalence of non-communicable diseases in rural areas of Bangladesh is not negligible that we find from the study. This result adheres to the results of a study conducted in Sreepur [27].

The study findings also revealed that a total of 37 respondents had both diabetes and asthma; 31 respondents had diabetes, asthma and peptic ulcer; 27 had diabetes, asthma, peptic ulcer and arthritis; and 23 respondents had diabetes, asthma, peptic ulcer, arthritis and heart disease. The presence of more than one non-communicable disease is significantly associated (p-value <0.05) with the age group and sex of the respondents (Table 4).

Table 4: Presence of more than one non-communicable disease/pathological condition among the respondents and it's association with their socio-demographic characteristics.

Socio-demographic characteristics	2 pathologies (Diabetes and Asthma) (37)	3 pathologies (Diabetes, Asthma and Peptic Ulcer) (31)	4 pathologies (Diabetes, Asthma, Peptic Ulcer and Arthritis) (27)	More than 4 pathologies (Diabetes, Asthma, Peptic Ulcer, Arthritis, Heart and other disease) (23)	P-value
Age group					
60-64 (164)	16	13	13	12	0.032
65-69 (103)	11	9	7	6	
70-74 (76)	7	6	5	4	
75-79 (19)	2	2	1	0	
>80 (19)	1	1	1	1	
Sex					
Male (232)	20	18	14	13	0.009
Female (149)	17	13	13	10	
Occupation					
Retired (46)	5	4	4	4	0.061
Housewife (122)	16	11	9	7	
Service (27)	2	2	2	2	
Business (61)	4	4	3	3	
Others (126)	10	10	9	7	

According to the findings of this study, majority of the respondents had more than one non-communicable disease. In this study, only major five types of non-communicable diseases were considered. Nearly half of the respondents had other types of non-communicable diseases. Another study was conducted in United States of America [28] which showed that sixty two percent of Americans over 65 have more than one chronic condition and the prevalence of multiple chronic conditions is increasing, due to aging of populations and to increasing diabetes rates [29]. The findings from this study are quite similar to the findings of the study conducted in USA.

Conclusion

The findings from this study illustrate that non-communicable disease is very much prevalent among the geriatric population as well as a threat to public health. The hospitals and health service providers should emphasize the management and prevention of these diseases. Also, lifestyle modification can play a vital role in preventing non-communicable diseases. Self-management

education is very much important for the early detection of any disease among elderly people. Dissemination of health education in a community-based approach and effective health services can be crucial tools to prevent geriatric disease. Also, a similar type of study is recommended in different regions of Bangladesh to generalize the findings.

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Conflict of Interest

The authors declared no conflict of interest for this study.

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