

The State of Physical, Recreational and Health Status of Senior Citizens in Bangladesh: A Comparative Study among the Residents of Old Home and Community Residents of Dhaka City

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Abstract

The increase of life expectancy of the population due to senior citizens is increasing in Bangladesh. So it is the right time to take essential step for their physical and mental wellbeing. So, for their welfare and wellbeing, it is needed to find out their health status. The study focuses on the comparison of the state of physical, recreational activities and health status of senior citizen living in old homes and community living in Dhaka city. A cross sectional observational study was conducted. The subjects were selected conveniently and conducted among 200 senior citizens residing at old home and 200 subjects from community living with family or alone. A well designed semi-structured standard questionnaire was used to collect required data from the study subjects. Mean age of the community and old home senior citizen was 62.16 ± 2.19 years and 62.92 ± 3.25 years respectively. More than half of the respondents were businessman among both community and old home dwellers. Over the last seven days about 8.5% senior citizen of community never walked outside home whereas it was quite double about 16.0% in old home dwellers but huge variation were observed in the case of often walker. Over the last seven days more than half of the respondents took part in recreational activities. About 88% community senior citizen and 96% old home senior citizen visited hospital in last 6 months. Prevalence of hypertension was 80% among community residents and 68% in old home dwellers. Diabetes was 61% and 68% among community and old home respectively. COPD was higher among old home dwellers (65%) than the community residents (47%). Arthritis was found a serious problem among the study subjects. Nearly 85% community residents and 72% in old home dwellers have been suffering from arthritis. Government and Non-government organization can come forward for the senior citizen of the country along with to develop awareness about arthritis risk factors for senior citizen by public health intervention.

Keywords: Physical status, Recreational status, Health status, Senior citizen, Old home.

INTRODUCTION

Recreational and physical activities bring mental and physical happiness and can improve physical and mental health. World Health Organization (WHO) (2004) stated that pattern of diseases among the senior citizens changes in life style due to increase life span¹ as well as WHO (2009) stated that second and third risk behavior in Bangladesh due to lack of physical

activity and inappropriate eating.² Bangladesh Bureau of Statistics (BBS) (2018) published the report on average life expectancy of senior citizen has risen to 72 years in Bangladesh. The BBS said life expectancy in Bangladesh has increased by 0.32 years per year on average. As like other developing country, senior citizens are increasing rapidly in Bangladesh. The size of the senior citizen will be assuming around 20%

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of the total population in our country within 2050. It is assuming that the highest part of senior citizen will be most challenge on economic and healthcare to our country in the future. The rising numbers of the elderly are the result of medical and social advances that have reduced deaths from infectious diseases, and of improved sanitation, housing and nutrition. Recreation is a major if we want to keep our seniors enhance quality of life, healthy and fit. DiPietro (2001) proved that active life style lowers risk of non-communicable diseases (NCDs) such as heart disease, stroke, type2 diabetes, cancers, depression and dementia.³ As opposed to, non-active or sedentary risk factors are considered as significant risk factor for chronic disease morbidity and mortality in senior citizens. There are some old homes in Dhaka city where people gets residency, food, medical service and rehabilitative care but lack of physical and recreational activity exists. Besides, Community people face obstacles to do physical exercise followed by recreational activity. However, there is a limited amount of information and activity needed to promote optimal health and function in senior citizen. In Bangladesh, the senior citizens suffer from back pain, hearing and vision problem, arthritis, asthma, diabetes, high blood pressure, dementia and depression. Social security and unemployment are challenges of elderly facing in Bangladesh due to increase in medical cost, pressure. Society can use elderly experience and wisdom knowledge for the national reconstruction. Senior citizens are the asset of the nation. The elderly is the last stage of our life cycle and a reality and everybody has to pass through this stage. So, it is the responsibility of all citizens of Bangladesh to come forward for the wellbeing of our senior citizens. In Bangladesh old home refers where above 60 years people can stay there as residency where they usually get food, treatment and accommodation. On the other hand community people reveal those live in community level with or without their family. To assess physical and recreational activities on health of senior citizens residing in old home and community was the aim of the study.

METHODS

A cross-cut comparative study was conducted to identify the state of physical, recreational activities and

health of senior citizen in old homes and community in Dhaka city. Considering time period and resource availability, cross-sectional analytical study design was most feasible for this study. Aged above 60 years people residing in old home as well as community irrespective of gender were study population. The study comprised of 400 subjects; Cases consisted of 200 subjects above the age of 60 years from old age homes from Agargaon and controls consisted of 200 subjects matched for age and gender from community. As no sampling frame is available in the community level, non-probability convenient sampling was used to collect study subjects. Data were collected from senior citizen in old home residents and community residents in Dhaka city from March 2018 to July 2018 through questionnaire by personal interview. Face to face interview was carried out. Health status was determined by taking history and conducting physical examination. After administering questionnaire, data were checked for consistency. Individual sheet was checked and cleaned to avoid any error. Data were categorized and coded during entry into the SPSS software. Collected data were analyzed by computer technology SPSS version 22.0. Collected information was presented in the form of tables and graphs. Descriptive statistics (mean, SD, frequency, percentage) and inferential statistics (Chi-square) were used. Permission from ethical review committee of Bangladesh University of Professionals (BUP) was taken. Consent was sought from old home authority. The study never discloses the name and personal information of any individual respondent at any point of time. Respondent's right to refuse and withdraw from the study was accepted. Level of significance was determined by 5% or 0.05.

RESULTS

Average age of the community and old home senior citizen was 62.16 ± 2.19 years and 62.92 ± 3.25 years. Among community dwellers 81.5% belonged to 60-64 years age group and 18.5% represented from 65-69 years. On the other hand more than half of the respondents (75%) belonged to 60-64 years followed by 22% from 65-69 years.

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Table 1. Age group of the respondents (n=400)

Age in year	Community	Old home
Mean±SD	62.16±2.19	62.92±3.25
60-64	163(81.5)	150(75.0)
65-69	37(18.5)	44(22.0)
70-74	0(0)	4(2.0)
75-79	0(0)	2(1.0)
Total	200(100.0)	200(100.0)

Results were expressed as Mean±SD and number (percentage)

Male was dominant among both group (community 90.50%, old home 93%).

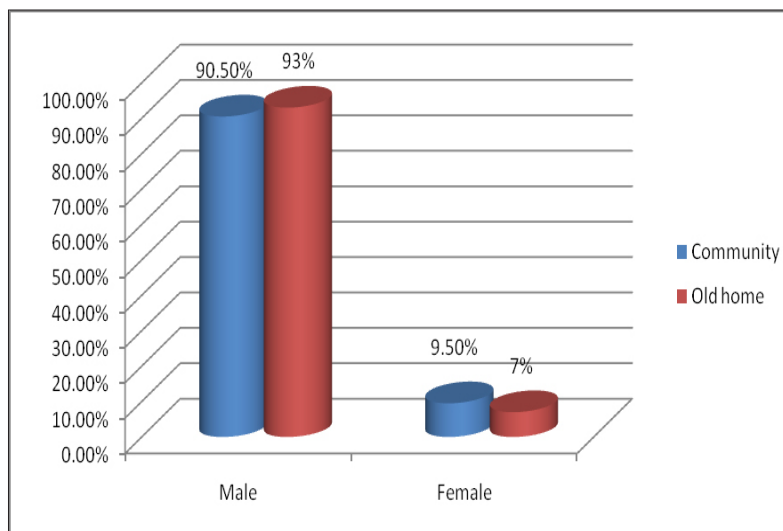


Fig 1. Gender distribution of the study subjects (n=400)

In case of SSC (Secondary School Certificate), Under SSC and primary level of education community dwellers were ahead than old home i.e. 22% vs 20%, 22.50% vs 13%, 13.50% vs 3.50% whereas opposite scenario was seen in Bachelor and HSC (Higher Secondary Certificate) level i.e. 20.50% vs 29% and 15.50% vs 26%.

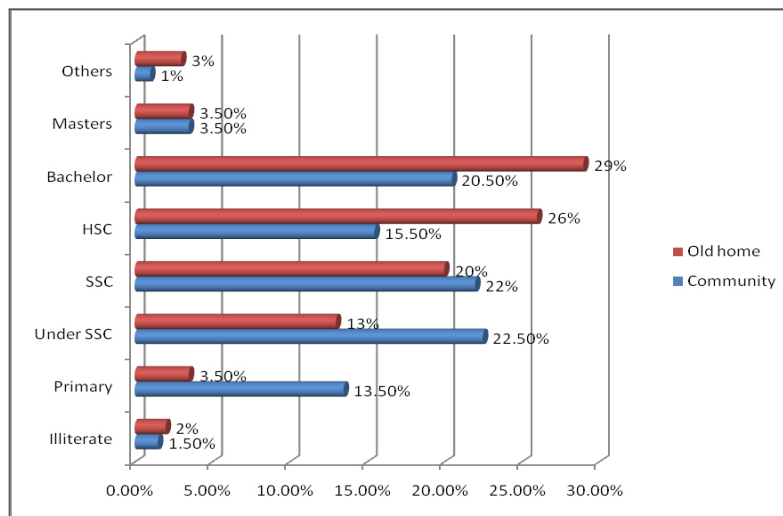


Fig 2. Education level of the respondents (n=400)

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Average monthly family income among community level and old home was 72560±39251.49 BDT and 99810±9772.02 BDT. About 53.5% and 41% of the respondents of community and old home citizens came from upper middle-income (\$299.68 - \$926.25 or BDT 21271-65761) family (The Daily Star, 2011). In case of high-income (≥\$926.33 or BDT ≥ 65762) group 43.5% and 56% respondents came from community as well as old home.

Table 2. Monthly family income of the respondents (n=400)

Family income	Community	Old home
Mean±SD	72560±39251.49	99810±9772.02
Low-income (≤\$75.41 or BDT ≤5360)	0(0)	0(0)
Lower middle-income (\$75.5 - \$299.58 or BDT 5361-21270)	6(3.0)	6(3.0)
Upper middle-income (\$299.68 - \$926.25 or BDT 21271-65761)	107(53.5)	82(41.0)
High-income (≥\$926.33 or BDT ≥ 65762)	87(43.5)	112(56.0)
Total	200(100)	200(100)

Results were expressed as Mean±SD, frequency and percentage

Over the past seven days 8.5% senior citizen of community never walked outside home whereas it was quite double (16.0%) in old home dwellers. Seldom walk outside home was prevalent among both group i.e. community dwellers 42.5% and old home citizens 57% but huge variation existed in case of often walking. About 83.5% community senior citizen and 70.1% old home residents spent <1 hour per day in walking. Majority of the study subjects did not engage strenuous activities though community dwellers were quite double (42%) than old home residents (20%) in case of seldom strenuous activities. Almost nobody engaged in muscle strength and endurance activities.

Table 3. Physical status of the study subjects (n=400)

Items	Community	Old home
Over the past 7 days, walk outside home		
Never	17(8.5)	32(16.0)
Seldom (1-2 days/wk)	85(42.5)	114(57.0)
Sometimes (3-4 days/wk)	70(35.0)	52(26.0)
Often (5-7 days/wk)	28(14.0)	2(1.0)
On average, hours per day spend walking		
<1 hr	152(83.5)	136(70.1)
1<2 hrs	29(15.9)	36(18.6)
2-4 hrs	1(0.5)	22(11.3)
Over the past 7 days, engage in strenuous activities such as jogging, or other similar activities		
Never	107(53.5)	160(80.0)
Seldom (1-2 days/wk)	84(42.0)	40(20.0)
Sometimes (3-4 days/wk)	9(4.5)	0(0.0)
On average, hours per day spend strenuous activities		
<1 hr	33(17.1)	44(22.2)
1<2 hrs	74(38.3)	82(41.4)
2-4 hrs	72(37.3)	70(35.4)
>4 hrs	14(7.3)	2(1.0)
Over the past 7 days, exercises specifically to increase muscle strength and endurance, such as lifting weights		
Never	198(99.0)	198(99.0)
Seldom (1-2 days/wk)	2(1.0)	2(1.0)

Over the past seven days more than half of the respondents took part in recreational activities such as watching TV or listening music but did not involve in recreational activities such as gardening, playing softball or Tennis.

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Table 4. Recreational status of the study subjects (n=400)

Items	Community	Old home
Over the past 7 days, taking part in recreational activities such as watching TV, or Listening to music		
Never	15(7.5)	0(0.0)
Seldom (1-2 days/wk)	34(17.0)	28(14.0)
Sometimes (3-4 days/wk)	106(53.0)	128(64.0)
Often (5-7 days/wk)	45(22.5)	44(22.0)
On average, hours per day spend in recreational activities such talking with friends or chatting with fellow?		
<1 hr	88(44.0)	120(60.0)
1<2 hrs	74(37.0)	72(36.0)
2-4 hrs	32(16.0)	8(4.0)
>4 hrs	6(3.0)	0(0.0)
Over the past 7 days, spend in recreational activities such as gardening, playing softball or Tennis		
Never	121(60.5)	120(60.0)
Seldom (1-2 days/wk)	51(25.5)	40(20.0)
Sometimes (3-4 days/wk)	26(13.0)	32(16.0)
Often (5-7 days/wk)	2(1.0)	8(4.0)

About 88% and 96% community and old home senior citizen visited hospital in last 6 months. Prevalence of hypertension was 80% (community) and 68% (old home). Diabetes was 61% and 68% among community and old home respectively. COPD was higher among old home dwellers (65%) whereas it was 47% among community people. Arthritic problem

was highest among all health problems. Eighty five (community) and seventy two (old home) percent senior citizen suffered from arthritis. About 37% community people suffered from skin diseases whereas it was 21% in old home. Appetite was good but heart disease was seen among 49% and 37% subjects.

Table 5. Health status of the study subjects (n=400)

Items	Community	Old home
Visited doctor or hospital in last 6 months		
Yes	176(88.0)	192(96.0)
No	24(12.0)	8(4.0)
Hypertension		
Yes	160(80.0)	136(68.0)
No	34(17.0)	60(30.0)
Don't know	6(3.0)	4(2.0)
Diabetes		
Yes	122(61.0)	136(68.0)
No	64(32.0)	64(32.0)
Don't know	14(7.0)	0(0)
COPD		
Yes	94(47.0)	130(65.0)
No	98(49.0)	64(32.0)
Don't know	8(4.0)	6(3.0)
Arthritis		
Yes	170(85.0)	144(72.0)
No	30(15.0)	52(26.0)
Don't know	0(0)	4(2.0)
Skin disease		
Yes	74(37.0)	42(21.0)
No	126(63.0)	158(79.0)
Appetite		
Good	168(84.0)	166(83.0)
Poor	32(16.0)	34(17.0)
Heart disease		
Yes	98(49.0)	74(37.0)
No	76(38.0)	104(52.0)
Don't know	26(13.0)	22(11.0)

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Significant association was found between residency and doctor visit last six months ($p=0.003$).

Table 6. Association between residency and doctor visit ($n=400$)

Residency	Doctor visit		Total	χ^2	p-value
	Yes	No			
Community	176(44.0)	24(6.0)	200(50.0)	8.696	0.003
Old home	192(48.0)	8(4.0)	200(50.0)		
Total	368(92.0)	32(8.0)	400(100.0)		

Results were published as number (%), χ^2 test was performed and $p<0.05$ was level of significance

Significant association was found between hypertension and walk outside home ($p=0.007$).

Table 7. Association between hypertension and walk outside home ($n=400$)

Residency	Hypertension			Total	χ^2	p-value
	Yes	No	Don't know			
Never	30(7.5)	20(5.0)	0(0.0)	50(12.5)	17.612	0.007
Seldom	139(34.8)	52(13.0)	7(1.8)	198(49.6)		
Sometimes	98(24.6)	21(5.3)	3(0.8)	122(30.6)		
Often	28(7.0)	2(0.5)	0(0.0)	30(7.5)		
Total	295(73.9)	94(23.6)	10(2.5)	400(100.0)		

Results were published as number (%), χ^2 test was performed and $p<0.05$ was level of significance

Significant association was found between COPD and walk outside home ($p=0.009$).

Table 8. Association between COPD and walk outside home ($n=400$)

Residency	COPD			Total	χ^2	p-value
	Yes	No	Don't know			
Never	38(9.6)	10(2.5)	4(1.0)	52(13.5)	16.955	0.009
Seldom	105(26.4)	87(21.9)	5(1.3)	197(49.6)		
Sometimes	71(17.9)	46(11.6)	4(1.0)	121(30.5)		
Often	10(2.5)	19(4.8)	1(0.3)	30(7.6)		
Total	162(40.8)	224(56.4)	11(2.8)	400(100.0)		

Results were published as number (%), χ^2 test was performed and $p<0.05$ was level of significance

DISCUSSION

According to BBS (2015) report, Among the total population, 2.85 percent belong to the age group 60-64 with 1.49 percent male and 1.36 percent female. Among the elderly people in Bangladesh, about one-third are illiterate (15 percent) or under primary (17 percent) and half of the elderly population have only primary education. Over the past seven days 8.5% senior citizen of community never walked outside home whereas it was quite double (16.0%) in old home dwellers. Seldom walk outside home was prevalent among both group i.e. community dwellers 42.5% and old home citizens 57% but huge variation existed in case of often walking. About 83.5% community senior citizen and 70.1% old home residents spent <1 hour per day in walking. Present study found that majority of the study subjects did not engage strenuous activities

though community dwellers were quite double (42%) than old home residents (20%) in case of seldom strenuous activities. Almost nobody engaged in muscle strength and endurance activities as well as over the past seven days more than half of the respondents took part in recreational activities such as watching TV or listening music but did not involve in recreational activities such as gardening, playing softball or Tennis. This paper was found that the leisure time activities of the respondents that 33.3% respondents were reading books, 6% were gossiping, 40.7% were watching TV, 14.7% were sleeping and 5.3% were listening music in their leisure time activities. The present study found that prevalence of hypertension was 80% among community and 68% among old home and diabetes was 61% and 68% among community and old home respectively.

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The present study found among community inhabitants was anxiety, depression, dementia and sleep disturbance was 40%, 15%, 35% and 49% whereas among old home dwellers it was 29%, 23%, 23% and 40% respectively. This finding was supported by the study carried out S. C. Tiwari, Nisha et al. editors.⁴ Study showed that most common mental health problem was depression (37.7%). The present study found that COPD was higher among old home dwellers (65%) whereas it was 47% among community people. Arthritic problem was highest among all health problems. Eighty five (community) and seventy two (old home) percent senior citizen suffered from arthritis. A community based study showed that arthritis was 34.5%, bronchial asthma was 10.9% and that was no significant impact of malnutrition on health problem of senior citizen.⁵ About 37% community people suffered from skin diseases whereas it was 21% in old home but heart disease was seen among 49% and 37% subjects.⁶ All the information could not be cover in the study. Purposive sampling due to small number of study population and study is limited to Dhaka city only, the result may not represent the situation of whole country.

CONCLUSION

Prevalence of hypertension was 80% (community) and 68% (old home). Diabetes was 61% and 68% among community and old home respectively. COPD

was higher among old home dwellers (65%) where as it was 47% among community people. Arthritic problem was highest among all health problems. Eighty five (community) and seventy two (old home) percent senior citizen suffered from arthritis.

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