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**GERIATRIC HEALTH PROBLEMS IN A RURAL COMMUNITY OF BANGLADESH**

Shaila Ahmed, Sonia Shirin, Masuda Mohsena, Nargis Parvin, Niru Sultana, Samia Sayed, Rishad Mahzabeen, Masuma Akter, Md. Abu Sayeed

*Department of Community Medicine, Ibrahim Medical College*

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**Abstract**

This cross sectional descriptive study was conducted in some rural communities of Sreepur Thana during the month of April 2007. The study population included those aged 50 years or more and residing in the study areas. A total of 226 respondents were selected purposively and were interviewed using a pre-tested questionnaire. The objective of this study was to assess their socio economic condition and identify their health problems.

The mean age of the respondents was found to be 62 years. Mean family size and monthly family income was estimated to be 5.31 and Taka 5857.52 respectively. More than half (64.2%) of the respondents were illiterate. Fifty eight percent of them were unemployed and 67.3% were found to be dependent on their family members. Most of them (65.5%) were found to be suffering from joint pains. Some cardio-respiratory problems like palpitation, dyspnea and chest pain was found to be significantly higher among the female respondents ( $p < 0.03$ ). ECG was done on 22 of them. Left ventricular hypertrophy was detected in 22.7% and ischemic heart disease in 27.27% of them. Systolic hypertension was significantly higher in the females ( $p < 0.01$ ). Majority of the respondents (64.5%) were found to have a normal fasting blood sugar level. Symptoms of prostatic enlargement like frequency, urgency, hesitation and post void dribbling of urine was respectively found to be present among 15.9, 62.8, 10.7 and 24.8% of the male respondents. In 11.4% of the female respondents, urinary dribbling was found. The mean age of menopause was estimated to be 48.46 years.

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**Indexing Words:** Geriatric problems, old age, community health, RFST.

**Introduction**

Ageing is inevitable, usually deleterious and eventually leading to death of the organism. Some disabilities like senile cataract, glaucoma, bony changes affecting mobility, diabetes, hypertension, failure of special senses etc. are inevitable with ageing. Study of these physical and psychological changes which are incident to old age is called gerontology and the care of the aged is called clinical gerontology or geriatrics<sup>1</sup>. More people in both high and low income regions are living longer than ever before. The net increase of older population worldwide is about one million every month, two thirds of them being from the low income countries<sup>2</sup>. Population ageing has grown into a 'defining

global issue' and concerns have emerged regarding development policy interventions appropriate for older people, especially in the area of elderly health problems and health care<sup>3</sup>.

Bangladesh, with one of the highest population densities (985/km sq) in the world, is projected to experience a dramatic growth in the absolute number of its population aged 60 years or older from the current level of approximately 7 million to 14 million by 2020<sup>4</sup>. Very little is known about the health of the aged and its problems in Bangladesh. This study was undertaken to explore the health problems present among the elderly people residing in some rural areas of Bangladesh.

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**Address for Correspondence:**

Dr Shaila Ahmed, Department of Community Medicine, Ibrahim Medical College  
122 Kazi Nazrul Islam Avenue, Shahbag, Dhaka-1000. E-mail: shaila.2007@hotmail.com

## Materials and Methods

This cross sectional study was conducted in the month of April 2007 in four villages of *Sreepur Thana* which was purposively selected as a part of our residential field site training (RFST) programme. All people of age group equal to or greater than 50 years were considered eligible for the study. The eligible subjects were selected purposively. Their age was determined on the basis of historical events like emergence of Pakistan in 1947, 'Language Movement' in 1952 and the 'First Marshal Law' proclaimed by Ayub Khan in 1958. Each eligible participant was informed about the purpose and the procedure of the study. After obtaining a verbal consent, a face to face interview was conducted using a pre-tested questionnaire having both structured and open ended questions. The questionnaire included socio-demographic variables like age, sex, education, sanitation, safe water, family size, dependency, occupation and monthly family income. Some questions related to health problems were also included in the questionnaire.

Systolic and diastolic blood pressure (SBP, DBP) were measured using a mercury sphygmomanometer after 10 minutes of complete physical relaxation. Fasting blood glucose (FBG) was estimated after about 12 hour fast using spectrophotometer ['One Touch' of LifeScan]. The subjects who had experience of chest pain with sweating were considered eligible for ECG.

## Definitions and Diagnostic Criteria

*Geriatric population*- The population which consisted of people aged 50 years and above was termed as geriatric population. *Primary education*- Education up to class five (5 academic years); *Secondary education*- Education up to class ten (10 academic years); *Normal eyesight*- Can perform daily activities without difficulty; *Impaired eyesight*- Has difficulty in performing daily activities; *Hypertension (sHTN, dHTN)* - systolic and diastolic pressure more than 135 and 85 mmHg, respectively. *Impaired fasting glucose (IFG)*- FBG 5.6-6.9 mmol/l; *Type2 Diabetes mellitus (T2DM)*- FBG e" 7.0 mmol/.

*Statistical Analysis*- After collection, data was checked, compiled and entered into the computer based SPSS program for analysis. Comparison of continuous variables between groups was done by t-test. Chi-square test was used to determine the association between categorized and or discrete data variables.

## Results

Overall, 226 (121men and 105 women) senior subjects from four villages volunteered in the study. The mean  $\pm$  SD values of the participants for age, SBP and DBP were  $62 \pm 11.4$  y,  $123 \pm 18.8$  and  $74 \pm 12.5$  mmHg respectively. Among the participants, 64% were illiterate, 67% were somehow dependant on other earning member(s) of the families and 58% were unemployed (Table 1).

**Table-1:** Socio-demographic characteristics of the respondents (n= 226)

| Variables         | n         | %       |
|-------------------|-----------|---------|
| Sex               |           |         |
| Men / women       | 121 / 105 | 53 / 47 |
| Education         |           |         |
| Illiterate        | 145       | 64.2    |
| Primary           | 54        | 23.9    |
| Secondary & above | 27        | 11.9    |
| Employment status |           |         |
| Employed          | 95        | 42      |
| Unemployed        | 131       | 58      |
| Dependency        |           |         |
| Dependent         | 152       | 67.3    |
| Not dependent     | 74        | 32.7    |
| Sanitary latrine  |           |         |
| Present           | 193       | 85.4    |
| Absent            | 33        | 14.6    |
| Source of Water   |           |         |
| Tube well         | 220       | 97.3    |
| Pond              | 6         | 2.7     |

The prevalence of systolic hypertension was 17.7%, being more or less equal in both sexes. Diastolic hypertension was present in 16.8%, males showing a greater prevalence.

Impaired vision was found among 21.6% of elderly men and women. A large number of the participants (65.5%) had complaints of pain in their joints which could be attributed to arthralgia or arthritis, common in the elderly [Table 2]. The women were more affected than the men (52 v.48%,  $p < 0.02$ ). Lesser number of participants had complaints of chest pain associated with sweating (14.2%). Again, the women had a higher frequency of this symptom (65.6 v. 34.4%). Likewise, history of fall was also significantly higher in the elderly female than their male counterparts ( $p < 0.05$ ).

**Table-2:** *The prevalence of old-aged diseases or symptoms or events (n = 226)*

| Variables                         | Total<br>n (%) | Men<br>(%) | Women<br>(%) | p<br>T test |
|-----------------------------------|----------------|------------|--------------|-------------|
| Systolic hypertension             | 40 (17.7)      | 19 (47.5)  | 21 (52.5)    | 0.008       |
| Symptoms / events                 |                |            |              | Chi-sq      |
| Visual impairment                 | 48 (21.2)      | 29 (60.4)  | 19 (39.6)    | ns          |
| History of fall                   | 40 (17.7)      | 16 (40.0)  | 24 (60.0)    | 0.043       |
| Joint pain (Arthralgia/arthritis) | 148 (65.5)     | 71 (48.0)  | 77 (52.0)    | 0.015       |
| Palpitation (unexplained)         | 94 (41.6)      | 42 (44.7)  | 52 (55.3)    | 0.017       |
| Cough (not categorized)           | 52 (23.0)      | 36 (69.2)  | 16 (30.7)    | 0.007       |
| Dyspnea (unexplained)             | 42 (18.6)      | 22 (61.1)  | 20 (38.9)    | ns          |
| Chest pain (non-specific)         | 50 (22.1)      | 20 (40.0)  | 30 (60.0)    | 0.022       |
| Chest pain with sweating          | 32 (14.2)      | 11 (34.4)  | 21 (65.6)    | ns          |

According to ECG tracing done on the risk group, the prevalence of IHD was 27.3% and LVH was 22.7%. Considering the total elderly participants, the prevalence of IHD and LVH were 2.7% and 2.2%, respectively.

Regarding fasting blood sugar level, only 3 (9.7%) respondents had FBS level more than 6.9 mmol/l and were diagnosed as diabetic.

The elderly men complained about some symptoms related to enlargement (or hyperplasia) of prostate. Of the symptoms, urgency, frequency, hesitancy and post-void dribbling were respectively mentioned by 62.8, 15.9, 10.7 and 24.8% of the males. In the elderly women, their mean  $\pm$  SD age of menopause was found to be  $48.5 \pm 4.1$  years. The prevalence of incontinence was 11.4%, post-menopausal bleeding was 5.9% and prolapse of uterus was 1%.

## Discussion

This cross-sectional study conducted in a rural community of Bangladesh is an exploratory attempt to detect the prevailing ailments in the elderly people. A total of 226 respondents were interviewed. The study had some limitations. It did not allow in depth exploration of the health problems and confirmation of diagnosis was not possible.

The mean age of the respondents was found to be 62 years. Mean family size and monthly family income was estimated to be 5.31 and Taka 5857.52 respectively. More than half of the respondents were illiterate (64.2%). Fifty eight percent of them were unemployed and 67.3% were found to be dependent on their family

members. A survey conducted in 1986 by the Bangladesh Association for the Aged and Institute of Geriatric Medicine (BAAIGM) on persons aged 60 years and above indicated an improvement in life expectancy. Most of them were found to be illiterate and had large families indicating a tendency to live together in joint families with children, grandchildren and other relatives. About three fourth of the respondents were reported to have financial hardship and difficulty in meeting the basic needs of life<sup>5</sup>.

ECG could be done on only 22 subjects where the only complaint used as a selection criterion was chest pain accompanied by sweating. In this group, the prevalence of LVH was 22.7% and IHD was 27.3%, which if extrapolated for the entire study population, would be 2.7 and 2.2%, respectively. Thus, the findings are consistent with a published report for both the sexes (2.6%)<sup>6</sup>.

The most striking observation among the symptoms was the common complain of joint pain which was the highest (65.5%) and chest pain with sweating was the lowest (14.2%). Both the symptoms were higher in women than men. Significantly higher frequency of joint pain in females is possibly due to osteoporosis in the post-menopausal phase. But, why the women compared with the men had higher frequency of chest pain could not readily be explained. Palpitation was also reported higher among the females than the male respondents. This is of course expected in early menopause. It is interesting to note that systolic hypertension was also significantly higher in elderly women than the elderly men. It is well known that atherosclerotic heart diseases are less frequent in women of reproductive age but the difference reduces as age advances and becomes almost equal to men in the post-menopausal life. Significantly higher frequency of hypertension, palpitation and chest pain among elderly female indicate female preponderance of atherosclerosis in the study subjects.

The study revealed that the prevalence of hypertension, diabetes and ischemic heart disease among the elderly people in the rural community are not negligible. The complaints related to joints are more common than all the other symptoms or diseases of elderly people of rural Bangladesh. Compared with elderly men, the elderly women were found to have higher risks (higher SBP, chest pain with sweating, palpitation) related to atherosclerotic heart diseases.

### Conclusion and Recommendations

Elderly people like all other high risk groups have the right to health services that can support their own efforts to maintain their health and prevent disability. Large scale surveys need to be undertaken to identify the extent and nature of the problems of the aged in Bangladesh and plan suitable approaches for the care of this population. It would be appropriate to link the care of the old with the Primary Health Care system now being strengthened in the country. A national policy for the aged is yet to be implemented and those aged 60 years and above are yet to be declared as 'Senior Citizens'. A cheap, accessible and effective geriatric health care service with an emphasis on health promotion, productive activities and rehabilitation programmes should be developed to protect the health and well being of the elderly people.

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**Editor's Note:** Residential Field Site Training (RFST) is an academic and university requirement for the 4<sup>th</sup> year MBBS students. Students' exposure to the rural community under this programme can be utilized in an effective and proper teaching environment. This paper shows that proper utilization of the allotted time can yield the desired goals. It is a culmination of the integration of class-room teaching and practical application of research methods, community health problems, report writings, presentations, and group efforts. We look forward to further articles on RFST programs.