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# Health Problems of the Geriatric People: A Community Based Study in a Rural Area in Bangladesh

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## Abstract

**A community based cross-sectional study among the geriatric people i.e. 60 years and above age group was carried out in the rural villages of Rangpur district with a view to find out their common health problems and the relationship between the health problems and some of their socio-economical factors. A total of 1000 geriatric people were interviewed. Among them 73.6% were male and 26.4% were female, majority of them (47.8%) were in the age group 60-64 years and about 30% of them were smokers. About 86% of the respondents were suffering from either a disease or diseases at the time of interview. The most common diseases suffered by them were arthritis, diarrhoea, hyperacidity and peptic ulcerative diseases, bronchitis, asthma, hypertension, cataract, dental caries, skin disease, diabetes mellitus, hydrocele, etc.**

**A positive relationship of disease prevalence was found with educational status (p< .001), economical status (p<.01) and dependency states (p< .001) of the respondents. Statistically significant relationship was found between dependency state and mental state of the respondents (p< .001). Good relation with other members of the family was found more in independent group (p< .001). This study might provide information to formulate effective preventive and control measures for health problems of the aged.**

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## Introduction

Aging is universal and it is inescapable, beginning at birth, which should be regarded as a normal biological process leading to functional deterioration, vulnerability and ultimately culminating to extinction of life[1]. The significant change in the composition of populations, with increased proportion of elderly people, has increased the problems of the older people[2]. The problems of the aged is not merely medical, it is physical, mental, economical and socio-cultural. Many things about geriatric health and health problems depend upon individuals desire and endeavour, socio-economic and environmental factors, which are changeable and preventable.

Gradually geriatric heath problems are making a greater demand on the health services of a community. The average life span of the people everywhere including Bangladesh has shown an increase in last few decades due to the worldwide progress of public health and phenomenal development in technology[2]. This has contributed significantly not only to the problem of " population explosion" in the developing countries

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but also to the problems of the aged and their care[2]. At present the number of aged people in Bangladesh comprise about 5% of the total population but the proportion is likely to increase two fold in next 25 years being 10.09 percent of the total population of 177 million in 2025[3].

There are facilities for the aged in the developed countries but in our country, it is very little[4]. Some voluntary organizations like Bangladesh Association for the aged and Institute of Geriatric Medicine has been working for the aged but it is negligible. Gray in a study showed that the elderly are the fastest growing section of the population and need a greater volume of medical help than any other section in the society[5].

We may now look at the problem of the aged in Bangladesh but very little information is available. This study is done with a view to find out the problems faces by the rural aged people which might help the concerned authority to formulate effective prevention and control strategies and also to improve the services at the old age.

## Materials and methods

This cross-sectional study was conducted in the rural villages of Rangpur district. The target population was people aged 60 years and above of both sexes. Sample size was 1000 and the sample size was determined by using the formula $n=(z^2pq)/d^2$, where p, the prevalence of disease of the aged people was considered 50% (assumed). Out of 8 thanas of Rangpur district, 4 thanas namely Rangpur Sadar, Mithapukur, Gangachara and Kawnia were selected by simple random sampling. A total of 250 respondents were interviewed on random basis for data collection from each Thana to cover a total of 1000 samples.

A medical graduate for each Thana was selected as an interviewer from respective Thana health complex. A doctor from Rangpur Medical College was appointed as field supervisor. Each interviewer moved from the respective Thana parisod and started data collection from the house having aged people adjacent to Thana parisod office and moved forward to fulfill the target of 250 according to a structured questionnaire, which was duly pretested. Principal investigator, co-investigator and field supervisor through repeated checking and supervision in the field checked validity and consistency of the data. Data were analysed by using computer SPSS programme and statistical interpretation were done by using Chi square test.

## Results

Among one thousand respondents, 73.6% were male and 26.4% were female. The highest numbers of respondents (47.8%) were in the age group 60-64 years and lowest (4.6%) in the age group 75-79 years. About 20% of the respondents were cultivators, 21% of them businessmen, 10.5% ex-service holder, 14% labour, 15% unemployed and 21% of them were housewives. The literate respondents were 48% and 52% of them were illiterate. About 43% of the respondents had no income at all and they had to depend upon other members of the family for money. About 53.5% of the respondents were independents and among the dependents, majority of them had to depend on sons. The spouses of 72.3% respondents were alive (Table-I). About 86% of the respondents had been suffering from single or multiple diseases during study period and the most common diseases suffered by them were arthritis, fever, cataract, diarrhoea, hyperacidity, bronchitis, dental problem, asthma, hypertension, skin disease, hydrocele, diabetes mellitus, etc (Table-II). Considering their complaints, 42.34% of the respondents had decreased vision, 35.42% had weakness, 11.65% had hearing defect and 3.86% had partial loss of memory (Table - III).

The prevalence of disease in illiterate group was higher than in literate group, which was statistically significant. Prevalence of disease was found significantly higher in low or no income group and also higher in dependent group than independent group, which were also statistically significant (Table- IV). Statistically positive association was found between state of dependency and mental state of the respondents (Table-V).

**Table-I:** Socio-economic profile of the respondents. n = 1000

| Name of factor | Types / Groups | Respondents No. | % |
|---|---|---|---|
| Sex | Male | 736 | 73.6 |
| | Female | 264 | 26.4 |
| Age group in years | 60 – 64 | 478 | 47.8 |
| | 65 – 69 | 220 | 22.0 |
| | 70 – 74 | 183 | 18.3 |
| | 75 – 79 | 046 | 04.6 |
| | 80 - + | 073 | 07.3 |
| Occupation | Cultivator | 196 | 19.6 |
| | Business | 209 | 20.9 |
| | Ex-service | 105 | 10.5 |
| | Labour | 140 | 14.0 |
| | Unemployed | 147 | 14.7 |
| | Housewife | 208 | 20.8 |
| | Others | 035 | 03.5 |
| Educational status | Illiterate | 523 | 52.3 |
| | Literate | 477 | 47.7 |
| Monthly income in Taka | No income | 426 | 42.6 |
| | ≤ 1500.00 | 385 | 38.5 |
| | 1501.00 – 3000.00 | 113 | 11.3 |
| | 3000.00 – 5000.00 | 039 | 03.9 |
| | 5001.00 – 10000.00 | 027 | 02.7 |
| | > 10000.00 | 010 | 01.0 |
| Dependency | Independent | 535 | 53.5 |
| | Dependent | 465 | 46.5 |
| | (i) On son | 396 | 39.6 |
| | (ii) On husband | 053 | 05.3 |
| | (i) On relative | 014 | 01.4 |
| | (ii) On daughter | 004 | 00.4 |
| Spouse | Present | 723 | 72.3 |
| | Dead | 274 | 27.4 |
| | Divorced | 003 | 00.3 |

**Table-II:** Distribution of the respondents by their current disease pattern. n = 1000

| Current Disease | | Respondents No. | (%) |
|---|---|---|---|
| Without disease | | 138 | 13.8 |
| With Disease: | | 862 | 86.2 |
| (a) | Arthritis | 401 | 40.1 |
| (b) | Respiratory tract infections | 377 | 37.7 |
| (c) | Cataract | 229 | 22.9 |
| (d) | Diarrhoeal disease | 166 | 16.6 |
| (e) | PU & Hyperacidity | 149 | 14.9 |
| (f) | Dental problem | 094 | 09.4 |
| (g) | Asthma | 070 | 07.0 |
| (h) | Hypertension | 067 | 06.7 |
| (i) | Hydrocele | 044 | 04.4 |
| (j) | Skin disease | 039 | 03.9 |
| (k) | Diabetes mellitus | 034 | 03.4 |
| (l) | Ear disease | 019 | 01.9 |
| (m) | Haemorrhoidal disease | 016 | 01.6 |
| (n) | Partial paralysis | 014 | 01.4 |
| (o) | PID | 009 | 00.9 |
| (p) | Cholecystitis | 008 | 00.8 |
| (q) | Hernia | 007 | 00.7 |
| (r) | Others | 073 | 07.3 |

NB: Increased percentage due to multiple responses.

**Table-III:** Distribution of the respondents by their complaints. n = 1000

| Sl. No. | General complaints | Respondents No. | (%) |
|---|---|---|---|
| 1. | Decreased vision | 636 | 63.60 |
| 2. | Weakness | 532 | 53.20 |
| 3. | Partial loss of memory | 58 | 05.80 |
| 4. | Hearing defect | 175 | 17.50 |
| 5. | Others | 91 | 09.10 |

NB: Increased percentage due to multiple responses.

**Table-IV:** Relationship between prevalence of disease and the socio-economical factors of the respondents.

| Sl.No. | Factors | Types | Respondents No. (%) With disease | Without disease | Total | Statistical interpretation |
|---|---|---|---|---|---|---|
| 1. | Educational status | Illiterate | 472(89.9) | 53 (10.1) | 525 | |
| | | Literate | 390(82.1) | 85(17.89) | 475 | P<. 001 |
| | | Total | 862(86.2) | 138(13.8) | 1000 | |
| 2. | Monthly income (Taka) | ≤ 1500.00 | 716(88.0) | 97(11.9) | 811 | |
| | | 1501 – 3000 | 88(77.88) | 25(22.1) | 113 | P < .01 |
| | | 3001 + | 60(78.95) | 16(21.1) | 76 | |
| | | Total | 862(86.2) | 138(13.8) | 1000 | |
| 3. | State of dependency | Independent | 439(81.7) | 98(18.3) | 537 | |
| | | Dependent | 423(91.4) | 40(8.6) | 463 | P < .001 |
| | | Total | 862(86.2) | 138(13.8) | 1000 | |

**Table-V:** Relationship between state of dependency and present mental state of the respondents.

| State of dependency | Present mental state of the respondents | | | |
|---|---|---|---|---|
| | Happy No.(%) | Frustrated No (%) | Unhappy No (%) | Total |
| Independent | 370 (68.90) | 140 (26.03) | 27 (5.03) | 537 |
| Dependent | 204 (44.06) | 230 (49.68) | 29 (6.26) | 463 |
| Total | 574 (57.4) | 370 (37.0) | 56 (5.6) | 1000 |

$X^2 = 45.22$; Df = 2; $p < .001$.

## Discussion

A community based study carried out on 327 persons over 50 years of age by the department of Social and Preventive Medicine, K.G. Medical College, Lucknow showed 52.2% were ill at the time of survey and illness rate was significantly higher in men than women. The main causes of illness were arthritis, cataract, bronchitis, fever, avitaminosis, diarrhoea and enteritis, skin disease, ear disease, asthma and rheumatism. On examination, 6.1% were hypertensive, 14.8% were glycosuric and 20% had helminthic infestation[6]. In this study the prevalence of disease is very high (86%) and frequencies of diseases were similar, to some extent with Lucknow study.

In a hospital-based study it was found that 9% of the geriatric people did not feel any lack of physical, mental or social well-being. Remaining 91% had some sort of lack in physical, mental or social well-being. Among them 46% complained of disability due to disease, 26% had dependence on others, 22% felt loneliness and abandoned. About 57% had financial constraints, 17% had familial disharmony and 4% complained of social mal-adjustment, many having multiple problems. Cardiovascular disease followed by ischaemic heart disease were the two leading geriatric diseases[7]. If myocardial infarction cases were considered, it might be the number one killer disease in geriatric population in that study like the western world[8, 9,10]. We found in our study that the highest prevalence of disease in geriatric population was arthritis, then cataract, diarrhoea, hypertension, bronchitis, dental problems, asthma, skin disease, D.M., etc. were common. In a study on health related quality of life in old age, it was found that the majority of the subjects aged 76 years lived independently and felt healthy, despite the fact that many had some diagnosed disease or disorder[11]. In this study dependent people suffered both physically and mentally more than that of independent people. In a study it was showed that health care service should be increased significantly as geriatric populations increasing day by day[12]. In another study it was found that there was a correlation between persistent depressive symptoms and widows[13]. In this study it was found that 72.3% of the respondents had their spouse present, 27.4% lost their spouse by death and 0.3% were divorced. Many of them who lost their spouse had no feeling towards life or were unhappy but statistical association between mental state and loss of spouse was not detected in this study.

This study might, to some extent, reflect the picture of those rural communities of Bangladesh, which are similar to study place. In Bangladesh like other developing countries, the geriatric population is gradually increasing and their problems are also increasing day by day. So more attention and extensive health care services, specially for arthritis, respiratory tract infections, cataract, gastroenteritis, etc. are being felt needed for the aged people.

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