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MORBIDITIES AMONG OLDER PEOPLE IN BANGLADESH: EVIDENCE FROM AN AGEING SURVEY

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ABSTRACT

In recent decades, the population structure in many countries has been reshaping due to combined effect of falling fertility and increased life expectancy. Because of demographic interaction, a trend of increasing proportion for aged 60 years or more has emerged which cause new concerns to academics, researchers and policy makers. Although ageing is relatively a new demographic phenomenon in Bangladesh, demographers however believe that it will have profound impact on the economy, politics and society as a whole. As more people live longer, retirement, pensions and other admissible social benefits tend to extend over longer periods of time. This makes it necessary for social security systems to change substantially in order to remain effective in particular for keeping the elderly in good shape. This paper attempts to explore the types of illness among older people in Bangladesh using data collected from a national survey. It also describes the factors associated with health situation of the elderly in Bangladesh.

Key words: morbidity, elderly, ageing, Bangladesh.

I. INTRODUCTION

In literature, evidence suggests that Bangladeshi population is in transition due to its socioeconomic changes in recent years (Khan, 2006; Khan and Raeside, 2005). A few decade ago, high fertility was considered to be a problem in Bangladesh. This situation is now changed as fertility has fallen to 3.00 births per woman as measured by the total fertility rate (TFR). It is expected to decline further in the coming decades. By 2050 the TFR is expected to as lower as 1.85 births per woman (Khan and Raeside, 2005). On the contrary, steady increase in life expectancy is expected in Bangladesh. In 1995-2000 the expectation of life at birth was 58.4 years which was only 37.5 years in 1950-1955. This is yet to rise more and by 2045-2050 the expectation of life at birth in Bangladesh is estimated to be 75 years. Consequently the existence and extent of ageing of population in Bangladesh is now a reality.

The number of older persons has increased more than 2.5 times during 1950-2000 (Figure 1). This trend is expected to accelerate and by 2050 the number of persons aged 60+ are projected to be approximately 40.5 million, which is roughly 6 times higher than what it was in the year 2000 (United Nations, 2005). A clear increasing trend in proportion of older people has been observed in Bangladesh although the country's annual growth rate has been declining over time (Figure 2). Therefore, more study is needed to understand the consequences of increasing older people and their well beings. It is particularly important for Bangladesh where resources are limited, poor socio-economic structure, corruptions and weak governance. However, where the country is fighting with huge other agenda, the issue of

ageing in Bangladesh as such has not yet received any priority from the government. Whereas from familial, societal and religious point of view one can argue that research is urgent for mapping the situation of elderly people in Bangladesh.

Figure 1: Population aged 60+ years Bangladesh.

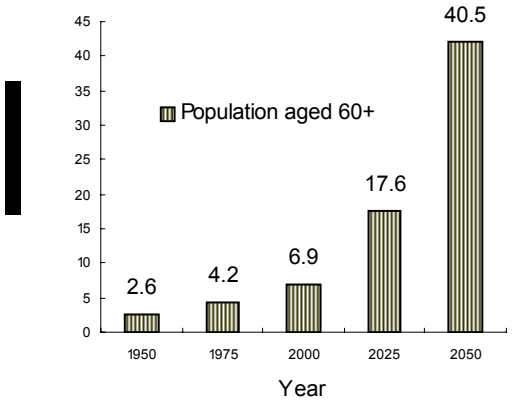
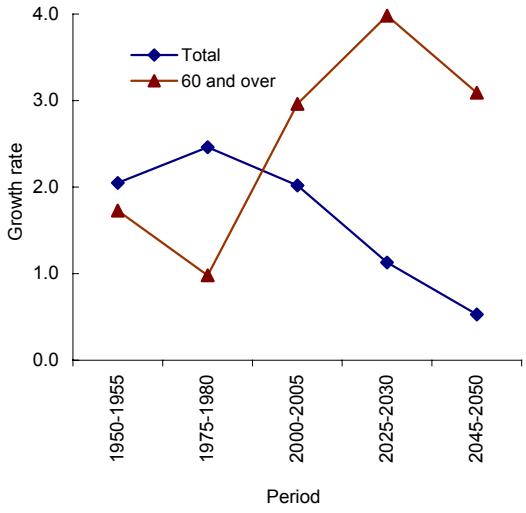


Figure 2: Annual growth rate of total population and population aged 60 + in Bangladesh: 1950-2050



Source: Drawn using World Population Prospects database, UN(2005)

As stated earlier ageing of population has been recognized as an outcome of complex demographic transition, socio-economic and environmental changes and more specifically human development. The dimension and extent of the population ageing are massive that in long run it will affect almost every aspect of our life. Earlier works have mainly attempted to emphasized on the causes and consequences of ageing in Bangladesh (see for example, Kabir, 1991,1992, 1994, 1998, Razzaque and Islam, 1997; Kabir and Salam,2000; Khan, 2006). However, relatively few study has focused on the epidemiology and health situation of elderly in Bangladesh. Perhaps the oldest study conducted by Ibrahim (1981) in his unpublished paper entitled "Problems of the Aged in Bangladesh" presented at the "Symposium on Population Development and Social Security: Ageing in Developing Countries, Hamburg, Federal republic of Germany" documented the health and socio-economic problems of older persons. Rahman (1990) pictured a depressing situation regarding the health and economic conditions of the aged people and recommended that a national policy should be formulated to set up health care units for the aged in general hospitals throughout the country and a program of free medical care for the aged should be gradually introduced in these hospitals. Mostafa and Streatfield (2002) in their study found that poor elderly largely attribute their health problems, on the basis of easily indefinable symptoms, like chest pain, shortness of breath, prolonged cough, breathlessness, asthma and so on. Mental health is also found to be another important health issue among rural elderly.

There is no clear cut information either on morbidity or on the health situation among elderly in Bangladesh. Therefore, in this paper an attempt has been made to explore the most common morbidities among elderly people in Bangladesh and to identify key factors associated with health situation in old ages.

II. METHODS

The Data

In order to draw a representative sample from all over Bangladesh, a multistage sampling design was used to collect information for the study. Data have been collected from all six administrative divisions in this following manner. Three districts from Dhaka and Rajshahi divisions, two districts from Chittagong and Khulna and one district from Barisal and Sylhet were selected randomly. At the second stage two Upazilas were selected randomly from the selected districts yielding a total of 24 Upazilas. From each selected Upazila two unions were selected randomly. There were 48 unions and

from each union two wards were selected one near to the Union Family Welfare Center and the other one away from the Health Facility. Thus there were 96 wards. From each selected ward 10 respondents (5 women aged 60 years and above and five men aged 60 years and above) were selected for the study. The total sample respondents were for the study 96*10= 960 (480 elderly women and 480 elderly men).

Statistical Analysis

Having completed an extensive review of past works variables were identified and incorporated for statistical analysis (Table 2). Focus was concentrated to determine the morbidities of diseases among the elderly and some relevant health related features. Both bivariate and multivariate analyses were employed to identify the important factors associated with the prevalence of diseases as well as with the duration of sufferings form diseases. Analyses have been carried out separately and put the together for comparison.

III. SOCIO-ECONOMIC AND DEMOGRAPHIC CHARACTERISTICS

We now discuss some of the socio economic and demographic features of the sample age-sex composition of the elderly, components of family structure - known as marital status, household size, types of family and so on.

Analysis reveals that a vast majority elderly belong to age group 60-64 years of which 38.3 percent are males and 40.5 percent are females. Result shows that percentage of elderly women falls after age of 70 years, which may be considered as an indication of negligence toward women's health care. In total 62.34 percent elderly were found to be married. Among males, majority (nearly 93 percent) are found to be married. On contrary, among female elderly 65.4 percent were found to be widowed. Analysis shows that the average family size of the elderly was 4.48 persons per family. About 68.50 percent of the total family comprises with family members at most 5. Female elderly usually live in larger family in higher percentages than their male counterpart.

The study shows 53 percent of the elderly used to live in joint or extended family. An interesting characteristic regarding structure of family reveals from the data: majority among the female elderly (64.1 percent) lived in joint or extended family but their male counterpart lived in single family in higher percentage (58.1 percent). It shows that the mean total family income was BDT 3204. About 86.52 percent of elderly among those who provide information of their family income have income less than or equal to TK 5000. A very tiny proportion (2.51 percent) of elderly had income more than TK 10,000.

About 59.17 percent of the elderly citizens were found to be illiterate. Some of the elderly (23.60 percent) admitted that they could only sign their name. Only 17.23 percent elderly had at least minimum level of education. The situation among women was found to be much worst. Around three forth of women were illiterate or had schooling experience.

Living arrangements of any person is certainly indicative to that person's socio economic status and has profound direct or indirect impact over his or her social behavior as well as over daily conducts. For example possession of assets like television or/and radio of any person in our society usually indicate that person's economic solvency at least to some extent. Again a possession of sanitary latrine at one's own residence is considered to be prestigious and acts as a symbol of economic solvency here in our society. By living arrangement we usually meant how a person lives up in his or her day-to-day life. For obvious reason in this study we concentrate on only some of very common features, like what sorts of house the elderly used to live in, types of toilet facilities they used, possession of assets like cultivable or house hold land, television or radio, consumption of electricity etc.

The most used housing material was found to be tin. About 56 percent elderly lived in tin shade house followed by 30.8 percent in kaccha house (made of mud, bamboo materials etc.). While only a minor fraction (2.8 percent) lived in paccka house (buildings made of bricks and concrete).

Our analysis shows that about 47 percent of elderly people had no possession of cultivable land, and only 5 percent had no household land. In both the cases the percentages for not possessing land ownership is much higher among the women elderly as compared to their male counterparts.

IV. HEALTH STATUS OF ELDERLY

Health is wealth. How healthy is our ancestry? What are the most common health hazards or sufferings? What proportion of them does have access to modern health care system? This section will focus on those issues and will answer some of the questions.

In the survey a number of relevant questions were asked on health conditions of the elderly. Since data are self-reported, they are more limited than from medical examinations. Some questions pertained to self-perceived health status, while others addressed us of medication and health services. According to Maddox (1962) self – perceived health status is not a good indicator, whereas according to Fillenbaum (1984), it may be a good indicator of potential service use than of actual health condition. However, self-assessments of health are common components of population-based surveys including various surveys of the elderly in developing countries. In this survey questions were asked to find out the usual health hazards as well as to realize the existing health care system of the elderly.

a) Prevalence of diseases

In order to assess the health status of the elderly, they were asked about some health related questions; such as whether they have any health problem, types of health problems, types of treatments they usually received, expenditure of treatments etc.

This study shows that for both sex almost 97 percent elderly suffer some sort of health problems. This prevalence is higher for females than their male counterparts. As can be seen from table 1 that the most common health problems are eye problem (45 percent), weakness (41 percent), arthritis (39 percent), high blood pressure (21 percent).

b) Duration of sufferings from diseases

Analysis shows that 63.5 percent of elderly suffered from different diseases at most 6 months and 23.7 percent had to suffer more than a year. Women are found to be more sufferer for short period. On the other hand, male were found to be suffering more among those who had suffer for more than a year.

c) Types of treatments received

Only 56 percent of elderly who had suffered from various diseases received some sorts of treatments For required treatment majority of the elderly (55.01 percent) depends on village or private doctor. Some of them depend on local pharmacy, govt. hospital, health center/NGO clinic, homeopath and even in some cases on indigenous doctor (kabiraj).

Table 1: Percentage distribution of usual health hazards* of the elderly citizen.

Ailment	% Of suffers among sex		% Of suffers in total sample
	Male	Female	
Eye problem	143 (31.77)	271 (56.69)	414 (44.66)
Weakness	158 (35.11)	225 (47.07)	383 (41.31)
Arthritis	186 (41.33)	179 (37.44)	365 (39.37)
Waist/back pain	55 (12.22)	236 (49.37)	291 (31.39)
Pain in joint	34 (7.55)	220 (46.02)	254 (27.40)
High blood pressure	76 (16.88)	118 (24.68)	194 (20.92)
Sleeping problem	25 (5.55)	144 (30.12)	169 (18.23)
Problem in heart	53 (11.77)	90 (18.82)	143 (15.42)
Asthma	69 (15.33)	44 (9.2)	113 (12.18)
Denture problem	42 (9.33)	54 (11.29)	96 (10.35)
Diabetes	31 (6.88)	19 (3.97)	50 (5.39)

*Only those diseases were shown in the table prevalence of which was exceeds 5 percent in the total sample.

d) Distribution of treatment cost

Report shows that 34 percent cases the elderly themselves bear their treatment costs. While son bears the treatment cost for the majority (54 percent) of the elderly. Some of elderly depends of daughter (7 percent) and grandchild (2 percent) for the purpose. It was seen that the percentage of male elderly who bears own treatment costs was higher than their female counterpart. While female elderly are used to depend on their sons and daughters higher proportionately.

e) Assistance obtain during suffering of diseases

Among male elderly, about 43 percent were seen to be self accompanied while going to treatment. On the contrary, female elderly used to accompany by their sons (40 percent) or daughter (16 percent) in higher percentage as compared to their male counterpart. Son as well as daughter in law also play most vital role during looking after their elderly parents at the time of illness. A significant number of elderly depends grandchild (14 percent) for take care during illness.

Basic needs of the elderly citizens

Proper treatment arrangements seem to the most mentioned (93.0 percent) basic needs of the elderly. Other basic needs include food (87.8 percent), social security in terms of financial allowances and health insurance (46.8 percent), and safe & hygienic shelter (35.6 percent), adequate family care (65 percent) etc.

Multivariate Analysis

Having reviewing the existing literature important variables are selected and is presented in table 2. Age, gender and marital status of the elderly seem to be highly significantly associated with prevalence of disease as well as with the duration of suffering from any specific disease (table 3). Behavior of family member is found to be an important factor for prevalence of diseases although not significant for the duration of sufferings from diseases.

The results of logistic regression are described in table 4. It shows that age, gender, marital status and hygienic toilet facilities are found to be very important factors for both the prevalence of diseases and the duration of sufferings from diseases. These results are similar to the chi-square tests. As expected older age is associated with 1.421 times higher risk of having diseases and approximately 1.705 times higher risk of suffering from any disease than their younger counterparts. Females are often suffering from diseases in developing countries. In Bangladesh, women are found to be associated with higher risk (1.670 times) and also suffer longer duration from a disease than male elderly. This reflects how vulnerable the female health situation is in a developing country. This is partly because poverty, women status, lack of education and early age at marriage play key role for ill health among women in Bangladesh.

Relatively lower risks are found to be associated with marital status in respect of having a disease or for a longer duration of suffering from a disease (table 4). It has been found that risk of having a disease among currently married elderly were 0.559 times less than those who were unmarried, separated, widowed or divorced. Married couples usually care for each other and can able to share mental and physical agonies in later life and therefore those who are unmarried, separated, widowed or divorced usually deprived from adequate required attention and care.

Education plays a significant role in controlling duration of sufferings from diseases. As can be seen from table 4 that the more is the educational level the less is the risk of sufferings. Similarly, use of hygienic toilet is associated with lower risk of having a disease and also less duration of suffering from a disease. Possession of cultivable land has a negative impact on the duration of suffering. Most of the results are in expected directions and are concomitant with the previous studies elsewhere. Apart from confirming the results of earlier findings, the study attempts to identify the influences of some new variables. In the next section, a brief discussion on results is given followed by a conclusion.

V. DISCUSSION

Ageing of population is a natural and unavoidable demographic process. All countries around the world have to face this reality in course of time. From the very beginning of this study we gradually discussed the inevitability of ageing of population both in global and Bangladesh perspectives, its possible demographic and socioeconomic consequences, and attempts to find the determinants that may have effect on the health status of the elderly in Bangladesh based on sample data. In this segment some recommendations are being made on the basis of the study done so far.

In view of gradual increment both in the number and proportion of the elderly in Bangladesh the aged population is becoming as a vulnerable group in the society. The well being of this increasing vulnerable group depends on the clear and precise understanding of certain features like their problems, demands for basic needs, status in the

family as well as in the society, living arrangements, support systems, potential economic involvement and some other relevant aspects. For this it is essential to provide the researchers with extensive comprehensive data materials.

Economic solvency proved to have positive impact on the well being of the status of the elderly. For this elder citizens should have the opportunity to work or to have access to other income generating activities. This will be beneficial both for society and for the elderly citizens. Because with involvement of the elderly in economic activities society will get the highest labor force participation, on the other hand activities such as these will be cheerful for the elderly and boost their emotional spirit.

Illiteracy was found to be wide spread among the elderly, particularly among the females. Therefore they should have access to continuing education and life-long learning. This education may be formal or informal. Such education will surely help them to keep themselves up in well-composed way.

Aged people prefer to live in family atmosphere and kinship bonds. But our family bonds are loosening up. Recent social changes such as urbanization, migration and increased female labor force participation mean that generations of a family may live in different places. These socio economic development proceedings will certainly put the well fare of the elderly in jeopardy. Sometimes despite the best efforts it is not possible for family members to look after old members properly. In spite of that the family continues t be the main source of social and economic support to the elderly. Hence efforts should be taken to promote the values of marriage, family togetherness' etc. more positively as it will surely plays most vital role in the well fare of the elderly.

Health is an important aspect of human life. As age progress virtually elderly both male and female reported to suffer from some sorts of health problems. The most stated health problems for both sexes were eye problem, weakness, arthritis, and high blood pressure etc. knowing the nature and extent of prevalence of diseases efforts should be taken to ease the access to treatment facilities for the elderly citizens. Government according to its capacity may provide with free or subsidized treatment facilities for the elderly, or at least can arrange separate arrangement in hospitals or health centers for them. These initiatives will surely make the life of our elderly more convenient.

In Bangladesh only a fraction of elderly citizens received some sorts of financial assistances in terms of pension or old age allowance. Pensions are provided only to the retired government officials and old age allowances to the poorest of the elderly. But none of these schemes seems to be enough for maintaining at least minimum standard of life. Government may consider increasing the amount of pensions or allowances as per its capacity to make the life comfortable for such elderly citizens.

We all can make their life more comfortable with our little awareness. This don't required government initiative or any huge amount of investment, all it takes awareness, respect towards the elderly. For elderly citizen we can reserve seats in public transportations, arrange special queue while proving any social service giving the elderly extra priority etc. All these small effort will bring huge positive impact on the life of the elderly.

The support of the mass media is essential as an ongoing exercise to take the message across to a wider section of the population of society. A positive image of the elderly should be promoted, through educational programs, drama, play, or articles portraying harmony, love and understanding between family members and the aged. The local advertisement agencies can also change the usual stereotyping of the old in their advertisements by not typecasting the ageing as being frail, weak, unproductive and useless.

We all should admit the fact that one-day, soon or later we will at the position where our elderly citizens are today. We should place ourselves at that place, realize their requirements and act wisely to respect them, to ensure better future for them as well as for us also.

VI. CONCLUSION

The study shows that ageing and illness is interrelated and is a natural process. We should not take it as burden or liability. It is very important to educate people and to build more awareness among people. Older people should be regarded as valuable human resources as they doing huge services at home and outside. Their residual capacity and rich experience should be properly

utilized for the over all socio-economic development of the society. Their ability to lead productive, healthy and meaningful lives should be ensured by the younger generations and the government respectively.

It is anticipated that the findings of the study will help the planners and policymakers to offer a better society in future.

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Table 2: Description of variables used for statistical analyses.

Variables	Definitions and categories of variables
Dependent variables	i) Prevalence of diseases (1 = Yes, 0 = No) ii) Duration of suffering from diseases (0 = At most 12 months, 1 = More than 12 months)
Independent variables:	Age of the elderly citizen (0 = At most 70, 1 = More than 70) Sex of the elderly (0 = Male, 1 = Female) Marital status of the elderly, (0 = Other than married, 1 = Married) Types of Family (0 = Single family, 1 = Joint or extended family) House hold size (0 = At most 5, 1 = More than 5) Educational status of the elderly (0 = Illiterate, 1 = At least minimum level of literate) Family income (0 = At most 4500, 1 = more than 4500) Behaviour of the family members towards the elderly (0 = Not so good, 1 = Good) Use of hygienic toilet (0 = Other than sanitary latrines, 1 = Sanitary latrine) Possession of cultivable land (0 = At most 150 decimal, 1 = More than 150 decimal) Consumption of electricity (0 = No, 1 = Yes) Possession of radio (0 = No, 1 = Yes) Possession of TV (0 = No, 1 = Yes)

Table 3: Chi-square tests for measuring association between 'prevalence of diseases' and 'duration of sufferings.

Background characteristics	Dependent variable	
	Prevalence of diseases	Duration of suffering from diseases
Age	4.509*	5.165*
Gender	29.844**	15.201**
Marital status	12.011**	8.926**
Types of family	2.718	0.071
House hold size	3.508	0.234
Educational status of the elderly	3.327	3.468
Family income	3.628	0.173
Behavior of the family members towards the elderly	7.915**	2.802

Note: * = Significant at P < 0.05 ** = Significant at P < 0.01

Table 4: Logistic regression for analyzing 'prevalence of diseases' and 'duration of suffering from diseases'

Independent variables	Dependent variable			
	Prevalence of diseases		Duration of suffering form diseases	
	Beta coefficient	Odds ratio	Beta coefficient	Odds ratio
Age of the elderly				
60 – 70 years	- - -	1.000	- - -	1.000
More than 70 years	0.352	1.421**	0.533	1.705**
Gender				
Male	- - -	1.000	- - -	1.000
Female	0.517	1.670**	0.856	2.355**
Marital status				
Others	- - -	1.000	- - -	1.000
Currently married	- 0.581	0.559**	- 1.938	0.145 **
Types of family				
Single family	- - -	1.000	- - -	1.000
Joint / extended family	- 0.071	0.932	-0.088	0.915
House hold size				
At most 5	- - -	1.000	- - -	1.000
More than 5	- 0.709	0.492**	- 0.296	0.280**
Educational qualification				
Illiterate	- - -	1.000	- - -	1.000
At least minimum level of education	0.315	1.371	- 1.272	0.280**
Family income				
At most 4500 BDT	- - -	1.000	- - -	1.000
More than 4500 BDT	0.189	1.208	0.047	1.048
Family members behavior				
Not so good	- - -	1.000	- - -	1.000
Good	-1.541	0.214**	- 0.247	0.781

*Note: * = Significant at P* < 0.05 ** = *Significant at P* < 0.01 *Odds 1 represents reference category*

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