Health and Nutritional Status of Aged People

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Abstract

Background: There is inadequate evidence based information to assist health policy makers in preparing for appropriate health, nutrition and social support guideline for the elderly in Bangladesh. **Objective:** The present study is an attempt to assess the health and nutritional status of elderly people in selected hospital in Dhaka. **Methods:** It was a cross sectional descriptive study. The subjects were selected purposively. The study was conducted among 50 elderly attending Bangabandhu Sheikh Mujib Medical University. Anthropometric data such as height and weight of the study subjects were collected by using standard techniques. Nutritional status was measured according to WHO guideline. **Result:** Most of the subjects belong to 60-64 yrs age group. Overall nutritional status as well as health status was not good and satisfactory. Most of them were suffering from malnutrition and arthritis as well as diabetes was very common. Partial reduced of appetite was seen among respondents. Dietary pattern was not good. **Conclusion:** Health and nutritional status of aged people in this study was not satisfactory. **Recommendation:** Intervention programs related to health and nutritional status may be arranged.

Key words: Health status; Nutritional status; Aged people.

INTRODUCTION

The Ageing is an ongoing physiological process. As mortality declining and improved public health interventions which result population ageing a worldwide phenomenon. During 2000-2030, the population of persons aged 60 years and above of the world has been projected to increase by about 550 million to 930 million, increasing from 6.9 to 12% worldwide and 6 to 12% in Asia[1]. Between the years 2000 and 2050, the world wide proportion of persons over 60 years of age is expected to become more than double, from the current 6.9% to 16.4%[2]. Life expectancy at birth is an age standardized summary measure of mortality. It reflects the outcome of overall improvement of health condition of a country. In 2010, the expectation of life at birth for males stands at 66.64 years and for females 68.79 years[3]. This rate is comparatively higher than previous years. It is commonly believed that the majority of the elderly population resides in developed countries. About 60% of the 580 million older people in the world live in developing countries, and by 2020, this value will increase to 70% of the total older population. Bangladesh is projected to be 1 of the 10 countries having largest elderly population. According to UN the total number of elderly people in the world will reach at 1200 million by the year 2025, which indicates that by this time15% of the total populations will reach 60 years or more. Total elderly population of the country 6.7% of the total population.(BBS- www.bbs.gov.bd) Which is projected to be doubled in 2015. So we can easily assume that if the problems of the elderly is not solved it will be a great problem for the country. Present total population of Bangladesh is about 15 crore and 30 lac will account about half of the world's total elderly population by 2025 along with other four Asian countries[4,5].

The rapidly increasing elderly population is a new and important group in terms of social economic and changing cultural context. According to Bangladesh census 2001 the number of elderly population was 7.8 million. The UNO projection suggests that by 2025 elderly population of Bangladesh will be 16.2 million and by 2050 it will raise to 42.2 million which will be little over 9 percent and 20 percent respectively of the total population[5]. The assessment of nutritional status requires the integration and interpretation of at least anthropometry biochemical and dietary intake. Rural elderly people have prevalence of Chronic Energy Deficiency (CED) 26% and at risk of CED 57% of the study population[6]. One of the indicators of achieving the Millennium Development Goal (MDG) is to halve the number of population who undernourished. In order to reach this goal Svedberg notes that 5 Ws will need to address: What constitute malnutrition, who are malnourished, where they are located, when they are malnourished and why they are malnourished[7]. As per the WHO guidelines people 60-74 years of age are called elderly and those between 75 and 85+ yeas of age as old. The projected elderly population aged 60 years and above in 2015 and 2025 will be 12.05 and 17.62 million. It has been observed that this change will have serious consequences on the overall socioeconomic development of the country[8]. The older persons, in Bangladesh, are passing their days amidst the tender care and support mostly provided by their extended families without any remarkable backing from the national level. However, the situation is in transition as the family pattern gradually shifting towards the nuclear type due to the change in values, migratory tendency of their offspring and poverty. The only support to the older persons in a large scale and nationwide from the Government is the provision of Old age allowance. As most of the elderly population in Bangladesh now lives in rural area so this allowance is helpful to them. But it is to be noted that many people who are living in Dhaka they become accustomed with these urban facilities, they cannot cope up in the rural areas of Bangladesh where these sorts of facilities are not available, so these people are settling in various areas of Dhaka where they can live in an up-to-date modern facilities. These people who are retiring recently living along with their children as the children need modern facilities which are only available at Dhaka. Comprehensive health policy exists for the elderly in Bangladesh. Geriatric problems are ignored in medical education and profession. There is a lack of information and research on elderly in health sector. There is scope for improving health and nutritional problems of the elderly people. Due to lack of premedical check up, health education, health care rural elderly people are more prone to suffer in eye, dental and gastro-intestinal diseases. Due to sedentary life style which are led in urban areas non-communicable disease are spreading like epidemics. Like Diabetes mellitus and Hypertension are seen in lots of elderly people. Nutritional status changes due to ageing process as well as these diseases. A study which was conducted in rural area of Bangladesh by Tamanna Ferdous (The Multidimensional background of malnutrition among rural individuals in Bangladesh- A challenge to Millenium Development Goal)

showed that 26% of elderly population are malnourished and 62% at risk of malnutrition[7]. Similar study was done by Dr. Z N Kabir which was entitled as Mini Nutritional Assessment of Rural Elderly people in Bangladesh: The impact of demographic, socio-economic and health factors[9]. A study was done by M.Taj Uddin et al of Department of Statistics Shahjalal University of Science and Technology, Sylhet, Bangladesh on Status of elderly people of Bangladesh: Health Perspective. Which shows that most of the elderly (55.7 percent) were average state of health and only 20.3 percent were not in good health[10]. The analysis also showed that respondents' present state of health is significantly allied with their age, level of education, monthly income, proper sanitation facilities and number of son or daughter, dwelling place and type of the family. The rising of percentage of elderly populations of various countries is not the similar. In Japan, the number of elderly people is increasing faster than in other industrialized countries where the number of elderly people is more than 11.65% of the total population. To ensure more emphasis on care and service issue for the elderly people, the Japanese Government has been observing a national aged day[10]. About 90% of the urban elderly males live alone and are married, whereas 89 percent of the rural elderly women living alone are widowed[11].

MATERIALS & METHODS

Study Area: Bangabandhu Sheikh Mujib Medical University

Study Period and Duration: From August 2013 to February 2014

Study Population: The study was conducted among 60 years old population attending Bangabandhu Sheikh Mujib Medical University for treatment purposes

Study Design: Cross-sectional descriptive study

Sample size: Sample size for the study was decided by following equation.
n=z2xpqd2   Here
n= desired sample size
z= Value of standard normal distribution as given level of significant (confidence level) usually considered value 1.96% confidence interval (CI)
p= 50% or (0.5) (As no study found)
          q= 1-P= (100 – 50) = 50% or (0.5)
          d= degree of accuracy desired
Usually set at 5% (0.05)
So by this equation
Sample size was n= 384
But due to time constrain and lack of resources I had to take 50 samples

Sampling technique: Purposive sampling technique was applied

Inclusion and exclusion criteria: Inclusion: Those age 60 years and willing to participate in the study Exclusion Criteria: Very sick and mentally retarded as well as not willing to participate in the study

Data collocation tool and instrument:
- Pre-tested semi structure questionnaire
- Weight machine
- Height measuring scale

Data collection method:
- Data were collected by pre tested semi structured questionnaires and in face to face interview
- Information about health status, nutritional status, dietary pattern along with socio-demographic characteristics were also obtained
- The field work was conducted in BSMMU Hospital
- The respondents were selected consecutively who met the inclusion and exclusion criteria

Data Analysis:
Data were analyzed by SPSS 16.0 version of computer technology

List of Variables:
Nutritional status, Health status, Dietary pattern, Age, Sex, Family size, Family income, Education, Occupation, Religion

Ethical consideration:
- Ethical permission from appropriate authority
- Informed consent
- Voluntary participation
- Maintain confidentiality

RESULTS

Figure 1 shows that 48%, 20%, 20%, 6% and 6% of respondents came from 60-64, 65-69, 70-74, 75-79 and >80 years age group respectively.
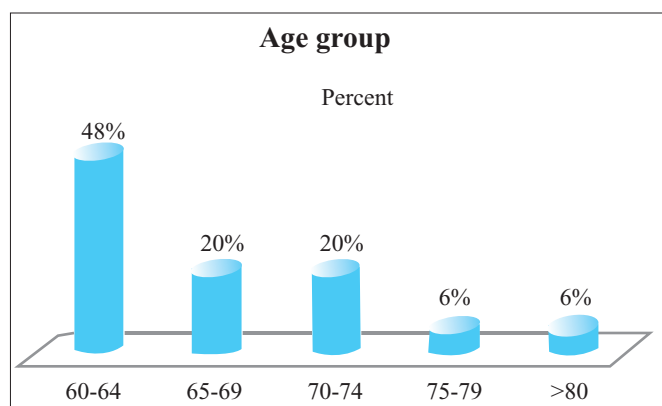

Figure 1 : Distribution of respondents by age (n=50)

Table1 : Distribution of respondents by educational status (n=50)

Illiterate, primary, secondary school certificate, higher secondary certificate and graduate was 30%, 36%, 10%, 12% and 12% of respondents.

Education	Frequency	Percentage
Illiterate	15	30
Primary	18	36
SSC	5	10
HSC	6	12
Graduate or more	6	12

Table 2 : Distribution of respondents by occupation (n=50)

Housewife, business and service holder was 30%, 16% and 12% respectively.

Occupation	Frequency	Percentage
Retired	4	8
Housewife	15	30
Service	6	12
Business	8	16
Others	17	34

Table 3 : Distribution of respondents by monthly family income (n=50)

Table 3 shows that among all the respondents 54% were lower middle income group (5361-21270), 16% were upper middle income group (21270-65761), 18% were low income group and 12% were high income group (>65761) according to 2006 Gross National Income (GNI) per capita and using the calculation of World Bank.

Monthly family income	Frequency	Percentage
<5360	9	18
5361-21270	27	54
21271-65761	8	16
>65761	6	12

Table 4 : Health status of respondents (n=50)

About 80% respondents suffered from chronic diseases. Arthritis and diabetes was more common. 50% of respondents told that their appetite had reduced partially.

Health status	Frequency	Percentage
Suffering from chronic disease		
Yes	40	80
No	10	20
Name of chronic disease		
Diabetes	5	10
Asthma	4	8
Peptic ulcer disease	3	6
Skin disease	1	2
Arthritis	13	26
Stroke	1	2
Heart disease	3	6
Others	10	20
Appetite		
Lost	8	16
Reduced	25	50
Partially reduced	7	14
No change	10	20

Table 5 : Nutritional status of respondents (n=50)

Underweight, normal, overweight and obese were 24%, 32%, 32% and 12% of respondents.

Nutritional status (BMI)	Frequency	Percentage
Underweight (<18.50)	12	24
Normal (18.50-22.99)	16	32
Overweight (23-26.99)	16	32
Obese (>27)	6	12

Table 6 : Dietary pattern of respondents (n=50)

Most respondents took rice 2-3times/day. Milk and fish was taken by 10 and 20 respondents at 2-3times/day. Meat and egg usually took weekly. Vegetables and soyabean were taken randomly. Ghee and butter were not taken regularly. Pulses were taken weekly. Soft drinks were not chosen.

Food item	2-3/d	1/d	2-3/w	1/w	Never
Rice	40	9	0	1	0
Ruti	3	22	13	4	8
Parata	0	7	16	7	20
Muri	3	7	21	11	8
Milk	10	9	11	7	13
Fish	20	8	16	1	5
Meat	6	3	14	18	9
Egg	8	3	16	13	10
Leafy vegetables	32	1	10	2	5
Non leafy vegetables	33	1	8	8	0
Fruits	18	2	6	6	18
Ghee	0	0	0	0	50
Butter	2	0	1	2	45
Soyabean	45	0	2	1	2
Lentil	11	1	18	0	20
Khesari	2	3	4	0	41
Motor	3	3	6	1	37
Mascoli	2	2	8	7	31
Singara	2	1	13	12	22
Puri	2	0	10	12	26
Noodles	0	1	5	11	33
Biscuit	4	3	16	15	12
Soft drinks	0	1	5	10	34

DISCUSSION

Body composition and therefore energy stores change during ageing, making malnutrition comprise a greater risk. Many other factors contribute to increasing the risk of malnutrition. A study conducted by Samad and Abedin found that majority of older people are in Bangladesh belong to the age group 60-69 years and same findings was found Taj Uddin and Chowdhury study which has a similarity with the findings of this study[12,13]. Most of the respondents came from lower middle income group. Housewife, business and service holder was 30%, 16% and 12% respectively. Besides Illiterate, primary, secondary school certificate, higher secondary certificate and graduate was 30%, 36%, 10%, 12% and 12% of respondents.

Nutritional status of the present study subjects represents surprising results. Underweight, normal, overweight and obese were 24%, 32%, 32% and 12% of respondents. In 2004 a study was conducted in our country, they found that the prevalence of malnutrition among older people living in rural community in Bangladesh was 26%[14]. Elderly individuals in rural Bangladesh are either undernourished or at risk of malnourishment where same scenario was present in this study at Bangabandhu Sheikh Mujib Medical University. According to Mini Nutritional assessment (MNA) score, result showed that 26% prevalence of protein energy malnutrition and 62% to be at risk of malnutrition were seen in rural Bangladesh[14]. One of the rare studies on adult nutrition in Bangladesh reports chronic energy deficiency prevalence of 63% and 72% among adults (19 years and older) in two selected rural areas[15]. About 4.8% was malnourished, 26.2% was at risk of malnutrition and 69% was well nourished in Mongolian elderly. In terms of body mass index, 4 in 5 of the elderly had values >21 kg/m^2 [16]. The prevalence of malnutrition was more common among the relatively older elderly women, which suggests worsening nutrition with advancing age[17]. Another study provides an anthropometric profile of elderly population living in urban Bangladesh and indicates high prevalence of malnutrition among them[18]. In central Uganda, the prevalence of malnutrition based on BMI and mid upper arm circumference within the population aged 60-90 years is reported to be 33% and 52% respectively[19]. In Poland Wojszel ZB found that 12% of them were malnourished, 61% were at risk of malnutrition and 27% were well nourished according to the MNA test[20]. About 80% respondents suffered from chronic diseases. Arthritis and diabetes was more common. 50% of respondents told that their appetite had reduced partially. Another study evident that when the age increases then the number of persons in good health decreases. Hossain et al. has found in his study that elderly people suffer from various complicated physical diseases and the number is increasing day by day[21-22]. Another study also found the same findings[18]. Most respondents took rice 2-3times/day. Milk and fish was taken by 10 and 20 respondents at 2-3times/day. Meat and egg usually took weekly. Vegetables and soyabean were taken randomly. Ghee and butter were not taken regularly. Pulses were taken weekly. Soft drinks were not chosen.

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CONCLUSION

Nutritional status of this study subjects showed most of them were malnourished (undernourished and over nourished) only 32% were normal. Overall health status was not good and most of them were suffering from chronic diseases like arthritis, diabetes, asthma, cardiovascular disease. Their appetite was decreasing day by day. Intervention programs related to health and nutritional status may be arranged.

DISCLOSURE

All the authors declared no competing interest.

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