Nutritional Status of an Aged Population in Selected Rural Area of Bangladesh

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Abstract

Background: Ageing is the accumulation of changes in a person over time. Ageing in humans refers to a multidimensional process of physical, psychological, and social change. Some dimensions of ageing grow and expand over time, while others decline.

Objective: The aim of this study was to assess nutritional status of aged people residing in rural area.

Methods: It was a cross sectional descriptive study. The subjects were selected conveniently. 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: About half of the respondents came from 60-69 years age group. Underweight, normal, overweight and obese were 28%, 42%, 18% and 12% of respondents. Most of the respondents (95%) took rice 2-3times/day. Vegetables were taken by 34% subjects weekly. Pulses were taken weekly.

Conclusion: About 42% respondents were normal in terms of nutritional status. Rice was randomly taken.

Keywords: *Nutritional status; Aged population; Rural area*

Introduction

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. Malnutrition is a great hazard to which the aged appears to be more vulnerable than the younger age groups due to problems relating to ignorance on appropriate food choices, loneliness, social isolation which often times lead to depression, apathy, lack of appetite, physical disabilities, cardiovascular problems and poverty among others [1]. In addition, it is evident that the elderly in developing countries will be vulnerable to health related predicaments associated with very low income, inadequate food intakes, poor food patterns, under-nutrition, over-nutrition, chronic illness and diseases [2-4]. A review of the reports from the few small-scale cross-sectional studies in developing countries revealed that a large number of older people in these regions are undernourished and that their dietary intakes are inadequate [5]. Most of the elderly population in Bangladesh lives in rural area. There is a lack of information and research on elderly in health sector.

Methodology

It was survey like cross sectional descriptive study. The study was conducted among ≥ 60 years old population residing in Belkuchi Upazilla in Sirajgonj district. Sirajgonj is the entry point of northern part of Bangladesh. Belkuchi is located at 24.2917°N 89.7000°E. It has 42413 units of house hold and total area 164.31 km². Belkuchi has a very plain land. It also has two main rivers flown over its geo plane. Jamuna and Hurasagar are the two main rivers. As of the 2011 Bangladesh census, Belkuchi has a population of 352835. Males constitute 179738 of the population, and females 173097. Belkuchi has an average literacy rate of 33.6% (7+ years), and the national average of 32.4% literate. Belkuchi has 6 Unions/Wards, 110 Mauzas/Mahallas, and 132 villages. Almost all of them used tube well as drinking water. Convenient sampling technique was applied to collect data. Face to face interview was taken. Very sick and mentally retarded as well as not willing to participate in the study were excluded. Total 100 samples were studied. For anthropometric measurements, height was measured with a standiometer and body weight was measured using a platform beam scale. Three measurements were taken three times and if the difference among reading was less than 1 cm, the mean measurement was taken and recorded to the nearest 0.1 cm. If the reading fell between two values, the lower reading was recorded. Weight was recorded to the nearest 0.1 kg. Food frequency questionnaire was used to assess dietary pattern.

Results

About half of the respondent's age was 60-69 years. Male were quite double than female. Most of the study subjects (43%) were illiterate. Most of them were housewife and farmer. More than half of the respondents (58%) had income less than 10000 Bangladeshi taka per month. More than two-third of the respondents lived in joint family. (Table 1) Underweight, normal, overweight and obese were 28%, 42%, 18% and 12% respectively. Most of the respondents (95%) took rice 2-3 times/day. Milk was taken 2-3 times/day by 22% respondents. Forty percent study subjects consumed fish one per week. Half of the respondents had meat weekly. Vegetables were taken weekly by 34% subjects. Eighteen percent subjects took fruits 2-3 times/daily. Soyabean was taken randomly. Pulses were taken weekly.

Discussion

Underweight, normal, overweight and obese were 28%, 42%, 18% and 12% in this study. Half of the respondents were normal and may be joint family played a vital role to take care them. Availability of fresh vegetables and milk were crucial factor. In 2004 a study was conducted in our country and found that the prevalence of malnutrition was 26% among older people living in rural community in Bangladesh [6]. Another study showed that 4.8%, 26.2% and 69% was malnourished, at risk of malnutrition and well nourished in Mongolian elderly [7]. 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 [8]. Bangladesh is based on agriculture and about 85% people live on agriculture. Rice is the most staple food here and grows plenty. The pattern of dietary intake of the elderly in Ibadan southwest Nigeria [9]. Where the dishes were mostly dominated by cassava products (eba and amala), cereals (rice), legumes by beans (Akara or moi) and tubers (yam eaten boiled or pounded). The foods consumed by the elderly in this study were mostly from plant based sources and animal based foods are only consumed when they have economic access to it.

Variables	Number	Percentage
Age (In years)		
60 - 69	47	47
70 - 79	39	39
≥ 80	14	14
Sex		
Male	66	66
Female	34	34
Education		
No schooling/Illiterate	43	43
Primary	29	29
Secondary	28	28
Occupation		
Housewife	30	30
Agriculture	32	32
Retired	6	6
Others	32	32
Monthly Income(BDT)		
< 10000	58	58
10000 - 20000	34	34
> 20000	8	8
Type of Family		
Nuclear	27	27
Joint	73	73

Table 1: *Socio-demographic characteristics (n = 100).*

Nutritional Status (BMI)	Frequency	Percentage
Underweight (< 18.50)	28	28
Normal (18.50 - 22.99)	42	42
Overweight (23 - 26.99)	18	18
Obese (> 27)	12	12

Table 2: *Nutritional status of respondents.*

Conclusion

About 42% respondents were normal in terms of nutritional status whereas underweight was 28%. Rice was randomly taken. Milk was poorly consumed. One third population consumed vegetables regularly.

Food Item	2-3/Day	1/Day	2-3/Week	1/Week	Never
Rice	95	5	0	0	0
Ruti	0	22	26	4	48
Muri	6	14	42	22	16
Milk	20	18	22	14	26
Fish	8	16	36	40	0
Meat	6	3	14	50	27
Egg	8	3	16	13	10
Vegetables	32	1	20	34	13
Fruits	18	4	12	12	54
Soyabean	100	0	0	0	0
Lentil	22	2	36	0	40
Mascoli	24	2	48	26	0
Singara	0	0	0	12	88
Biscuit	8	6	32	30	24

Table 3: Dietary pattern of respondents.

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