

Anthropometry of Reproductive Aged Women of Rakhaine Ethnic Community: BMI is the key

MOONMOON HOQUE

Lecturer, Department of Nutrition and Food Engineering
Faculty of Allied Health Sciences, Daffodil International University

Md MONOARUL HAQUE¹

Technical Advisor, Institute of Neurodevelopment & Research

MOHAMMAD SHAHINOOR ISLAM

MPhil in Public Health, BSMMU

SAZEDA KASHEM

Nutritionist, PADT Health Care Center, Uttara, Dhaka

SHARMIN SULTANA

MS (Thesis), Department of Applied Nutrition and Food Technology

Islamic University, Kushtia

Md AL JAHIDI HASAN CHOWDHURY

PhD Fellow, Rajshahi University

Abstract:

Background: Diet and nutrition are important factors in the promotion and maintenance of good health throughout the life cycle. Income, prices, individual preferences and beliefs, cultural traditions, as well as geographical, environmental, social and economic factors all interact in a complex manner to shape dietary consumption patterns and affect the morbidity and clinical status of women. Objective: To explore nutritional status of Rakhaine reproductive aged women was our ultimate goal. Methods: This was a cross sectional descriptive study conducted among conveniently selected 100 samples. Nutritional status was determined by body mass index (BMI) recommended by World Health Organization (WHO) for Asian people. Results: More than half of the respondents were 26-36 years age group and illiterate. Two-third of women was housewife. About 58% family had monthly income 5000-10000 BDT. All were Buddhist. Normal, underweight

¹ Corresponding author: monoarmunna@yahoo.com

and overweight was 69%, 20% and 11% respectively. Rice, soyabean, nappy and vegetables were consumed by almost all at 2-3/day. Fish, meat and egg were eaten weekly basis. Pork and kuiccha fish was special traditional tribal diet. Conclusion: Overall nutritional status need to be further improved. In future study on their physical activity and micronutrient intake can be carried out.

Key words: Anthropometry, Reproductive age, Ethnic community

Background

Bangladesh is the ninth most populous country and one of the most densely populated countries in the world.¹ Over population and poverty are pervasive in Bangladesh and causing population hazards like the problems of malnutrition. Specially, women are particularly vulnerable; suffering from social, economic and nutritional deprivation to a far greater extent than men.² Mothers do not eat enough food to meet their energy and micronutrient needs, particularly during pregnancy when these needs are greatest.³ Undernourished mothers are often physically weak and are unable to perform income-earning activities and household work to their full potential. Mothers who are undernourished before or during pregnancy are more likely to give birth to underweight infants. These infants face a disadvantaged future: they may grow poorly during childhood, do less well at school, and have less productive working lives. In addition infant girls with low birth weight are more likely to become undernourished mothers themselves, thereby perpetuating the cycle of under nutrition from one generation.⁴ A recent small-sale study of carried out by NSP survey 2000 of 57000 women revealed that almost one half (45%) of rural mothers and one third (34%) of mothers in urban slums have a BMI less than 18.5 kg/m² and are undernourished. Using population projections from the 1991 census, an estimated 9 million women of childbearing age (15-

44 years) are undernourished in rural Bangladesh compared with only 0.8 million women in a developed.⁵ It is known in Bangladesh tribal population living in different ecosystem and depends on primitive agricultural practices; they often face uncertainty of food supply and tend to suffer from under nutrition but we do not know the original scenario. Hence to fill up some of this information gap, the present study is an attempt to assess the nutritional status of reproductive age women by anthropometry.

Methods

Study design: This was a descriptive type of cross sectional study.

Study area: The study was carried out from Rakhaine Palli of Kuakata of Patuakhali district (Southern part of Bangladesh)

Study population: The study populations were reproductive aged (15-49 years) women

Study period: The study was conducted over the period of 2 months

Sample size: Data were collected from 100 women

Sampling technique: Convenient sampling technique was followed.

Data collection: Data were collected through face to face interview methods. For the collecting of data and filling up the interview schedule the following materials were used.

- a. Weight machine (Digital machine)
- b. Height measuring scale

Nutritional status was determined by body mass index (BMI) recommended by World Health Organization (WHO) for Asian people.⁶ 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.

Quality control of data: The data were checked and verified by the investigator at the end of the work every day. Any inaccuracy and inconsistency was corrected in the next working day. However cross checking of the collected data was done randomly.

Data processing and data analysis: The data entry process started immediately after the completion of data collection. The collected data was checked, verified and then entered into the computer. Only fully completed datasheet was entered into the computer for the final analysis. The analysis was carried out with the help of SPSS (Statistical Package for Social Science) Windows software program.

Result

More than half of the respondents were 26-36 years age group and illiterate. Two-third of women was housewife. About 58% family had monthly income 5000-10000 BDT. All were Buddhist. (Table1) Normal, underweight and overweight was 69%, 20% and 11% respectively. (Figure 1) Rice, soyabean, nappy and vegetables were consumed by almost all at 2-3/day. Fish, meat and egg were eaten weekly basis. Pork and kuiccha fish was special traditional tribal diet. (Table 2)

Table 1: Socioeconomic characteristics of study subjects (n=100)

Variables	Number	Percentage
Age (in years)		
15-25	37	37
26-36	56	56
37-47	7	7
Education		
No schooling/illiterate	65	65
Primary	27	27

Secondary	4	4
Higher-secondary & above	4	4
Occupation		
Housewife	71	71
Agriculture	10	10
Service	5	5
Business (shopkeeper)	14	14
Monthly income(BDT)		
<5000	39	39
5000-10000	58	58
>10000	3	3
Religion		
Buddhist	100	100

Figure 1: Nutritional status of study subjects (n=100)

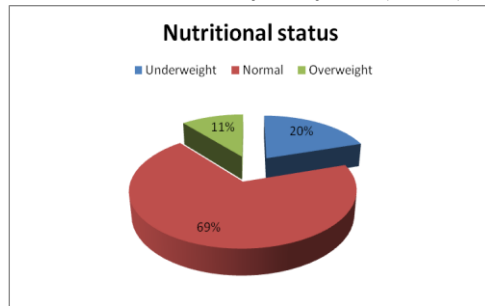


Table 2: Dietary pattern of study subjects (n=100)

Food items	Frequency			
	2-3/day	1/day	2-3/week	1/week
Rice	100	0	0	0
Fish	0	5	47	48
Meat	0	3	27	70
Egg	1	22	47	30
Vegetables	97	2	1	0
Fruits	20	5	25	50
Soyabean	100	0	0	0
Lentil	2	27	61	10
Special tribal food				
Pork	0	0	0	20
Nappy (mixture of different fishes)	100	0	0	0
Kuiccha fish	0	0	0	37

Results are expressed as number only

Discussion

Nutritional status is the result of complex interactions between food consumption, overall health status and health care practices. Poor nutritional status is one of the most important health and welfare problems that are faced by Bangladesh. Women of reproductive age are especially vulnerable to nutritional deficits and micronutrient deficiencies. The present study found 100% Buddhism. According to UNDP report in 2009 there are roughly 1.3 million tribal/ethnic people as of 2009. According to 1991 Census about 82 percent of tribal/ethnic people were living in rural area and 18 percent in urban areas. A very high proportion of tribal/ethnic people follow Buddhism (37%), followed by Hinduism (21%), Islam (18%), Christianity (11) and other belief system (13%).⁷ Normal, underweight and overweight was 69%, 20% and 11% respectively in the present study. Another study showed that overall, 28.5% of the reproductive aged women were found to be underweight.⁸ A study showed that a total of 34% of the reproductive aged rural women suffer from malnutrition.⁹ UNICEF stated that the nutritional status of women in Bangladesh is also alarming. The body mass index (BMI) of 52 per cent of women of reproductive age is less than 18.5; this means they are very underweight. They are also very stunted. Higher prevalence and higher risk for underweight among the younger women is a matter of concern. This is because, the higher incidence of underweight among women aged 15-29 may cause low birth weight of their child as well as other adverse maternal complications due to malnutrition, as the rate of pregnancy and childbirth is higher among these groups of women in Bangladesh. Detailed investigations into the dietary habits and physical activity in this population are necessary.

Conclusion

One of the foremost objectives of our nation building activity is the maintenance, sustenance and improvement of the nutritional status of reproductive aged tribal women. Overall nutritional status need to be further improved. So it is required to conduct the educational programmes on nutritional aspects.

Acknowledgement

The authors express their sincere thanks to all the participants of this study. No external funding was provided for this study. It was self motivated effort.

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