

Nutritional Knowledge and Parctice of "Dhakaiyyah" Population

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Abstract

A cross sectional study was conducted among two hundred(200) mothers having childern under five. These respondent mothers belongs to different socio- economic group fo "Dhakayyah" population and living in the old part of metropolitan Dhaka city at least for five generations. Result of the research showed that, more than 50% of the respondents had education up to secondary level whereas; 3.5% were illiterate. Almost half (45%) of them were in 30-39 years age group, 35.5% of were 20-29 years, and 17.0% were of 40-49 years age groups. Majority (76.5%) of the respondets were in upper income level and 99% of them were housewives, only 1% were service holders. Majority of the respondents (66%) washed vegetables after cutting them into small pieces and almost all (93.5%) threw rice water away after cooking. Knowledge about all the energy giving foods like rice. Bread and potato were significantly associated with monthly income when income was classified into two groups (<10,000 and abve 10,000 taka per month). Almost half (42.86%) of the respondents fed their babies cereals as home made supplemnetary food whereas only 23.8% of mothers gave egg to their babies.

Key Words : Nuritional Knowledge, Dhakaiyyan Population, Food Behaviour, Supplementary Food.

Introduction

Bangladesh is among the least developed countries in the world which represents all the charecteristic fearutes of under development recent statistics shows that the half (53%) of the total population is living below poverty level¹, simultaneously the density of popoulation is extremely high which is further deteriorating the hygienic condition and health and posing barriers to proper nutrition. Despite the positive changes in the health sectro, malnutrition is still major health problem and in unexpectedly high. Still the rate of low birth weight is 50%², stunting remains at 51% ;and more than 70% of pregnant women are anemic⁴. Additionally 25 to 50% of the

Bangladesh Journal of Nutrition, Vol 14, December 2001. Institute of Nutrition and Food Science, University of Dhaka, Dhaka-1000, Bangladesh.

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children die before their fifty birth day and more than 50% of these deaths are related directly or indirectly to malnutrition. It has been shown in last three national nutrition surveys that low intake of foods aggravates the nutrition situation^{3,5,6}. The problem of malnutrition in poor societies is best viewed as a "syndrome of developmental impairment", which includes growth failure; delayed motor, cognitive and behavioral development; diminished immune competence and increased morbidity and mortality.⁷

Though our poor socio-economic structure lies at the pivotal point for causing malnutrition, lack of proper nutrition and hygienic knowledge is also an important regulator. The literacy rate in Bangladesh is about 65%, which is higher among men than women. Many research data showed that educational level directly affects food intake and health care⁸. To improve the health situation of a country and achieve optimum health of the people, education and specifically nutritional knowledge are necessary.

Improper food habits are another causal aspect of the problem of malnutrition although food is a common denominator to all people throughout the world. In other words, food habits may also be called repetitive characteristics acts, largely automatic, that an individual competes in order to satisfy a real need for food⁹. People's attitude and values on food and nutrition influence their food habits in a given situation. Values and attitude may be influenced or modified by education or through suggestions from people in influential roles.

Dhaka is the historic city which possibly grew as a center of artisans and craftsmen and thus having some commercial importance. This city is a silent evidence of continuous evolution of time and having an urban culture in a region largely rural in character, due to rural migration from all over the country. Migrated population are having different types of regional food habits, because food habits are deeply rooted in the geographical location, customs, religion and education of a given society^{10,11}. Simultaneously, old inhabitants of Dhaka city, commonly known as "Dhakaiyyah" though not in proportionate number but still constitute significant portion of the Dhaka city population. Insufficient information is known about the health and nutritional behaviour of this "Dhakaiyyah" population. So the present study was undertaken to obtain information regarding their socio-demographic, educational aspects, food habits, nutritional knowledge and nutritional status of selected households. Towards achieving health for all by 2005 A.D.⁴, this research findings will help planners of the Govt. to adopt appropriate means to improve health and nutritional status of these particular population.

Methods and Materials

Description of study location

A descriptive and cross sectional study was conducted in some specific areas of the old part of Dhaka city, which extended from Sutrapur to Hazarihag in east to west and between old Dhaka railway road and river Buriganga in north to south.

Sample selection

This study sample includes 200 married women having one or more children of under 5 of above mentioned area of Dhaka city, generally known as " Dhakayyah" who were residing in the study location for at least five generations. In order to achieve the statistically significant required sample size, random sampling method was followed, covering the whole area.

Sample Size Determination

The minimum sample size was estimated by using the following formula :

$$n = Z^2 pq / d^2 = (1.96)^2 (0.5) (0.5) / (0.1)^2 = 96 \approx 100$$

where, Z = Standard Normal Deviate + 1.96 (at 95% confidence level), p = Anticipated population proportion, q=1 -p and d = The maximum allowable error. Considering design effect of 2.0, the final sample size was calculated as $100 \times 2 = 200$.

Study instruments

A systematized structure of questionnaire was formulated to collect the information regarding nutritional knowledge, attitude and practice about nutrition, health and food habit of the research population. The questionnaire also included questions about their socio-economic characteristics.

Data collection

Before initiating the data collection, using the structured instruments, exploratory qualitative research was conducted with key informant interviewing, focus groups and unstructured observation techniques. Every focus group discussion was participated by 12 respondents.

Data processing and Analysis

Editing was carried out by checking and verifying the completed questionnaires at the end of each selected household interview and also at the end of the day. The data analysis was done by using SPSS PC+ package

and tabulated accordingly to the key variables. Necessary statistical analysis were done for significance test.

Results

The present study was undertaken in selected "Dhakaiyah" population living in old part of Dhaka city at least for five generations. A total of 200 households were randomly selected. Of them 82.5% respondents were living in the study area for more than five generations.

Socio-demographic data of the respondents were presented in Table-1, which showed that more than 50% of the respondents had education up to secondary level & above and only 3.5% of them were illiterate. Almost half (45%) of them were in 30-39 years age group, 35.5% of were 20-29% 17.0% were of 40-49 years age groups and only 2% of them were above 50 years. Majority (61.5) of the households were having monthly income above TK. 1500. Ninety-nine percent of them were service holders, Table 2 showed the knowledge above Tk. 1500. Ninety-nine percent of them were service holders. Table-2 showed the knowledge about cooking and food preparation of the respondents. Most of the respondents (93.5%) threw away rice water after cooking and sixty-six percent of the respondents cut vegetables and then wash it.

Table 1. Socio-economic data of the respondents (n = 200)

Age :						
Years	< 20	20-29	30-39	40-49	50+	
Percentage	0.5	35.5	45.0	17.0	2.0	
Educational Qualification :						
Level of education	Illiterate	Primary	Secondary	S.S.C	H.S.C	Graduate & above
Percentage	3.5	14.5	53.0	15.5	12.5	1.0
Monthly Income :						
Amount (Tk.)	< 10,000	10,000-14,999	15,000-19,999	20,000-24,999		25,000+
Percentage	23.5	15.0	20.5	24.5		16.5
Occupation:		Housewife			Service	
Percentage		99.0			1.0	

Table 3 represents the percent distribution by educational qualification versus nutritional knowledge about energy giving food (EGF). When the respondents' nutritional knowledge about EGF and body building foods were assessed, significant association with literacy were found with rice

($p < 0.0002$), bread ($p < 0.002$), Potato ($p < 0.0002$), pulse ($p < 0.05$), egg ($p < 0.01$), milk ($p < 0.007$) and meat & fish ($p < 0.007$). When the respondent's nutritional knowledge about body building foods were assessed, significant association with literacy were found with pulse ($p < 0.05$), egg ($p < 0.01$) and milk ($p < 0.007$) and no significant association with meat/fish ($p < 0.06$).

Table 2. Respondents Knowledge about cooking as well as food preparation

Rice water thrown away after cooking			
Response	yes	No	Sometimes
Percentage	0.5	35.5	45.0
Vegetables preparation for cooking			
Type of washing	cut then wash	wash then cut	
percentage	66.0	34.0	

Percent distribution of respondent's monthly income vs nutritional knowledge about energy giving and body building food presented in Table 4. When income was classified into two groups Tk. 10,000 and above 10,000 take per month, significant association were found among all three energy giving foods, rice ($p < 0.01$), bread ($p < 0.04$) and potato ($p < 0.003$). In case of body building foods, significant associations were found with meat & fish ($p < 0.03$), egg ($p < 0.003$), milk ($p < 0.07$). But no significant association with pulses ($p < 0.43$).

Table 3. Percent distribution by respondents educational qualification VS nutritional knowledge about energy giving food and body building food

Education qualification	Energy giving food							
	Rice		Bread		Potato			
	Incorrect	Correct	Incorrect	Correct	Incorrect	Correct		
Illiterate	76.8	32.2	96.5	3.5	93.0	7.0		
Literate	55.2	44.8	77.6	22.4	74.1	25.9		
	P < 0.002 (S)		P < 0.0002 (S)		P < 0.0002 (S)			
Body building food								
Education qualification	Meat and Fish		Pulses		Milk		Egg	
	Incorrect	Correct	Incorrect	Correct	Incorrect	Correct	Incorrect	Correct
Illiterate	71.8	28.2	96.6	3.5	68.3	31.7	66.2	33.8
literate	58.6	41.4	89.7	10.3	48.3	51.7	48.3	51.7
literate	P < 0.06(NS)		P < 0.05 (S)		P < 0.007 (S)		P < 0.01 (S)	

Figure 1 shows the type of food given to the baby for supplementation by respondent mothers. Among the respondents 42.8% gave meat, 9.52% gave fruit, 7.76% gave fish and 4.76% gave egg to their babies.

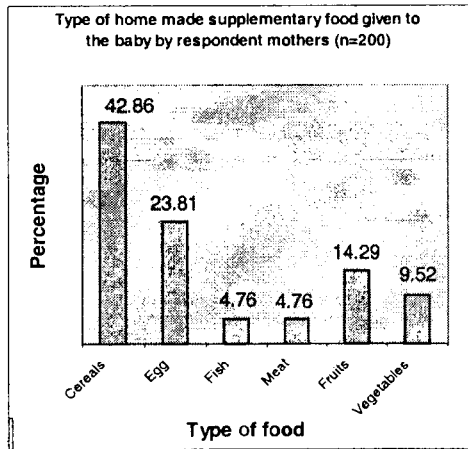


Fig. 1. 42.86% respondents fed their babies cereals as home made supplementary food and gave egg to their babies.

Discussion

The old Dhaka city has its own history. It was once the capital of eastern Mughal Empire. The old town became the centre of the present study, as this part of the Dhaka city has its own originality. Unlike the new town, the old town has characteristic customs and cultures prevailing there for decades. The lanes and bi-lanes of the old town lined up by street food shops have original Dhakkiyyah food from which the actual and original behaviour of Dhakaiyyah food can be studied.

Table 4. Percent distribution by respondents monthly income and nutritional knowledge

Monthly Income (Tk.)	Energy giving food							
	Rice		Bread		Potato			
	Incorrect	Correct	Incorrect	Correct	Incorrect	Correct		
illiterate								
< 10,000	80.5	19.5	96.1	3.9	96.1	3.9		
10,000+	68.2	35.8	87.8	12.2	82.1	17.9		
	P < 0.002 (S)		P < 0.0002 (S)		P < 0.0002 (S)			
Monthly Income (Tk.)	Body building food							
	Meat and Fish		Pulses		Milk		Egg	
	Incorrect	Correct	Incorrect	Correct	Incorrect	Correct	Incorrect	Correct
< 10,000	76.6	23.4	96.1	3.9	70.1	29.9	70.1	29.9
10,000+	62.2	37.4	93.5	6.5	57.7	42.3	55.3	44.7
	P < 0.03(S)		P < 0.43 (NS)		P < 0.07 (NS)		P < 0.03 (S)	

The present study was undertaken in selected "Dhakaiyyah" population living in old part of Dhaka city at least for five generations, to assess the nutritional status of the respondent mothers, pattern of the food behaviour, knowledge about nutrition and to determine the relationship between their food habits and socio-economic conditions. By no means the authors have not undermine the study population by classifying them as "Dhakaiyyah", it is rather a known terminology usually that identifies these population from others living in ancient part of Dhaka city for last five generations or more. For this purpose 200 families were studied and the wife/mother of each family was chosen for interview. The mothers were having mostly (53%) the secondary level of education (Table 1). The age of respondents were from 20-50 years and they were from different income categories ranging from TK.10,000-25,000. Majority (61.5%) of the households were having monthly income above TK. 15,000/-, in upper income level which influenced their food behaviour and nutritional status. This finding is co-related with the findings of research done by other researcher¹¹. Where a number of factors, like income, availability of food, personal and environmental hygiene, sanitation, quality of drinking water and food habits influence the nutritional status of an individual.

Respondent's knowledge about cooking and food preparation (Table 2) shows that a majority of respondents (66%) washed vegetables after cutting them into small pieces and only (34%) cut vegetables after washing them whole. This practice no doubt contributes to the retention of water-soluble vitamins. Almost all (93.5%) of the respondents throw rice water away after cooking. It is obvious that nutrients retention is best if rice water is retained after cooking and vegetables are first washed then cut and cooked. This findings are in the same line by KHare¹³ where it showed that Indian women not only distribute cooked food, she also controls food waste, whether cooked or uncooked and vegetables are washed first and then cooked.

On the basis of chi-square test, it was found that when the nutritional knowledge about energy giving foods were assessed, commonly used energy giving foods (rice, bread and potato) has significant association with literacy (Table 3) When income was classified into two groups <10,000 and above 10,000 take per month, significant associations were found among all the energy giving foods like rice, bread and potato. It is known to everybody that training itself can only create awareness among the people but other steps have to be made for adaptation of new knowledge.

The knowledge of the respondent mothers reflected on the practice of the mothers about the home made supplementary food given to their babies. Majority (42.8%) of the respondents fed their babies cereals as home made supplementary food and the 23.8% of mothers gave egg to their babies. It appears from the study that mothers education and nutritional knowledge are highly associated with the nutritional status of their children. This

findings is also in line with findings of another researcher of India¹⁴. His findings suggested that health education messages should stress the importance of gradually introducing home made supplementary food to children by age 6-9 months with the objective of reducing wide spread malnutrition in children under five. People usually take long time to change traditional beliefs, attitudes and practices and hence nutritional improvement is a long term, step by step, gradual process, where first step is the creation of nutritional awareness among the people. It is not true that only expensive food can give better nutrition. Most people of our country do not have nutrition education, as a result malnutrition develops in the community even having good income. The result of this study may be of use to educate other people for the improvement in the dietary intake according to their socio-economic status.

Acknowledgments

The authors thankfully acknowledge the contribution of Luna Chowdhury, Rana Sultana, Shumi Parvin Chowdhury and Dilruba Fatema - M. Sc. students of College of Home Economics, Dhaka of 1995-96 session for their overall inputs.

References

1. BBS. Statistical Year Book of Bangladesh, 2000.
2. United Nations Children's Fund BBS. Statistical Year Book (UNICEF), The state of the world's children 1998. Bringing science to bear : Oxford university press, Oxford UK, 1998.
3. INFS, Dhaka University, National Nutrition Survey of Bangladesh, 1995-96.
4. Ministry of Health and Family welfare, Concept paper, National Nutrition Program, April 1998.
5. INFS, Dhaka University, Nutrition Survey of Rural Bangladesh, 1975-76.
6. INFS, Dhaka University, Nutrition Survey of Rural Bangladesh, 1981-82.
7. Martorell R. The nature of child malnutrition and its long-term implications. *Fd Nutr. Bull* 1999; 20(3) : 288-292.
8. Reckel R V and Jordan R M. *Psychology : the nurse and the patient*. 1967;2
9. Ann MB, Field W and Kathryn K. *Community Nutrition and individual Food Behavior*. Burgess publishing company, 1979.
10. Bourne GH and Kumar S, ed. *World Review of Nutrition and dietetics, food, Nutrition and Health Serie*, 1973.
11. Haider A. Dhaka History and Ramance in Place Names" 1967; 54-55.
12. Christakis GE. Nutritional Assessment in Health programs, *Am.J of Public Health*, 1973; 66 :11.
13. Khare RS. Womens role in Domestic Food acquisition and food use in India : A case study of low income urban households. *Fd. Nutr. Bull*. 1984, 6(1); 69-76.
14. Chirmuley D, Adn Bisal R. Nutritional status of Tribal under five children in Abmadnagar District, Maharashtra in Relation to weaning/feeding Practices *Indian ped* 1993; 30(2): 215-222.