Nutritional Status and Hygiene Practice among Ethnic Communities in Selected Area of Bangladesh

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Abstract

Malnutrition is a common problem in Bangladesh. Nutritional status is a sensitive indicator of community health. The study was done to assess the nutritional status and hygiene practice among ethnic communities in Bangladesh. It was a Cross sectional study. The subjects were selected purposively. This study was conducted at sadar upazilla of Bandarban district in Chittagong division. Nutritional status was measured anthropometrically using body mass index according WHO classification and socioeconomic information, hygiene practice were presented as descriptive statistics (mean, standard deviation, frequency, percentage). Anthropometric data such as height and weight of the study subjects were collected by standard techniques to calculate body mass index. Statistical analyses were performed by appropriate univariate and multivariate techniques using SPSS windows 11.5 version. A total of 227 study subjects aged (Mean±SD) 35±15 years were studied. Among the study subjects majority of the tribal population were Marma (52%) and rest of were Bawm (21%), Murong (18%), Tripura (3%), Khyang (3%), Tanchyanga (2%) and Chak (1%). Among the study subjects, most of the respondents (62%) were found normal in their nutritional status, 18% found underweight, 14% were overweight and only 6% were obese. Forty one percent of respondents were used to washing their hand with soap before taking meal but rest of the respondents (59%) were found to wash their hand only with water before taking their meal and 59% of the respondents washed their hand with soap after toilet. All the study subjects were found to wash their hand before preparing food and to wash their utensil. A smaller number of respondents (34%) were found to practice reheating their foods before serving. As outcome of better nutritional and hygiene status, majority (89%) of respondents were found to have no disease during the last two weeks of interview. Though nutritional status and hygiene practice among tribal population in selected area of Bangladesh are apparently satisfactory, as revealed in present study still there remain some lacking in this segment. Therefore, a more effective and targeted health and nutrition education program focusing nutrition and hygiene among our tribal population deserves to be suggested for implementation.

Key words: Nutritional status, Hygiene practice, Ethnic community.

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Introduction

In South East Asia, Bangladesh is a densely populated country with a well-off tribal presence. Although as Bangladeshi, we like to establish ourselves as homogenous national body, a significant part of the total community could not converge to a single dot. We should not consider tribal people as outsider who treaded here in the fallow land thousand years before but it is their ill-fate that led them to poverty, malnutrition, starvation and so on. [1] WHO cites malnutrition as the gravest single threat to the world's public health.[2] The prevalence of malnutrition in Bangladesh remains among the highest in the world.[3] Persistent malnutrition contribute not only to widespread failure toward meeting the first MDG of having poverty and hunger, it also undermines efforts to reach MDG relating to maternal and child health.[4] Malnutrition and hunger feed directly into ill health and poverty.[5] Bangladesh has a variety of tribal population reflecting its great ethnic diversity. They constitute about 1% of total population, though they are scattered all over the hilly and dense forest region of the country. So, as observed, their ethnic origin, culture, feeding practice, literacy rate and profession are different from those of indigenous Bengali people. As these are very important determinants for nutrition, it is expected that there will be an obvious difference in the nutritional status of ethnic communities from that of Bengali population.[6] Nutritional assessment by anthropometric measurement is an important technique for identifying individuals, groups or communities whose growth is not keeping up with the expected pattern.[7] Nutritional status is a sensitive indicator of community health especially the prevalence of under nutrition that affects all dimensions of human development and leads to growth faltering in early life .[8] Proper hand hygiene, the simplest infection prevention measure, can reduce outbreaks of pathogen transmission and food borne illness and also increase antibiotic resistance.[9,10] Therefore, the study was undertaken for the assessment of nutritional status as well as hygiene practice among ethnic communities. These are primary and important steps for the formulation of any public health strategy to combat malnutrition of any community.

Materials and Methods

A cross sectional study was conducted among 227 tribal people of Bandarban sadar upazilla in Bangladesh. This hilly and riverine area was selected purposively for data collection and to get adequate sample of study population because ethnic communities with their different socio-economic status usually stay there in one area. The study subjects included all adult people who were willing to participate and provide required information. Physical and mental retarded people and very sick were not included in the study. A pre-tested and semi-structured questionnaire was

used to solicit information on socio-demographic characteristics, nutritional status, hygiene practice and disease frequency of tribal people. Nutritional status was determined by body mass index (BMI) recommended by World Health Organization (WHO) for Asian people.[11] For anthropometric measurements, height was measured with a standiometer and body weight was measured by standard procedure. Three measurements were recorded and the mean measurement was taken to the nearest 0.1 cm. Weight was recorded to the nearest 0.1 kg. For assessment of hygiene practice, hand washing practice and food preservation practice among study subjects were observed. Before data collection, permission was taken from the Headman/Karbari for each ethnic community. All the tribal people were informed about the study and different local language interpreter from different ethnic communities were engaged to translate questionnaire. After collection, data were checked thoroughly for consistency and completeness. Data were checked after collection of data to exclude any error or inconsistency. All analysis was done by appropriate statistical methods using Statistical package for Social Sciences (SPSS) software for Windows version 11.5. Descriptive statistics (Mean±SD, frequency, percentage) were used to show results. The socio-economic classification in this study was made according to 2006 Gross National Income (GNI) per capita and using the calculation of World Bank (WB)[12] (The groups were: low-income $75.41 or less (BDT $\leq$ 5360), lower middle-income $75.5 - $299.58 (BDT 5361-21270), upper middle-income $299.68 - $926.25 (BDT 21271-65761) and high-income $926.33 or more (BDT $\geq$ 65762).

Results

Table 1 shows socioeconomic characteristics of the study subjects. Mean age of study subjects were 35±15 years. In terms of religion, 52% were Buddhist and 26% were Christian, 17% were Crama as well as very few were Muslim (2%) and Hindu (3%). Amongst the respondents, 54% had no schooling, 13% had upto primary education, 27% had upto higher secondary education, 6% had graduation but no respondent was found to have post graduate level of education. Majority of the study subjects were male (73%) and female were 27%. Among the respondents 27% were farmer, 15% were housewives, 13% were involved in business, 13% were service holder, 24% were student and rest of respondents (8%) were day laborer. Majority of this tribal population were Marma (52%) and rest of were Bawm (21%), Murong (18%), Tripura (3%), Khyang (3%), Tanchyanga (2%) and Chak (1%). Forty nine percent of the respondents (49%) were from lower middle income family, 45% were from lower income family and 6% were from upper middle income family.

Figure 1 shows nutritional status of study subjects. Among the study subjects most of the respondents (62%) were found normal in their nutritional status, 18% were found underweight, 14% were overweight and 6% were obese.

Nutritional statuses among different ethnic communities are shown in Table 2. The scrutiny reveals that, most of Marma ethnic study subjects (56%) were found to have normal nutritional status and 21%, 15% and 9% were found to have underweight, overweight and obesity respectively. Among Murong ethnic community majority (71%) of study subjects were found to have normal nutritional status, but 25% and 5% were found to have underweight and overweight respectively. Similarly, among Bawm ethnic community, most of the study subjects (77%) were identified with normal nutritional status but 15%, 4% and 4% were found to be overweight, obese and underweight respectively. Although the least study subjects were included from Tripura, Tanchyanga, Khyang and Chak ethnic community, yet the distribution of Tripura subjects showed equal trend in terms of underweight, normal, overweight and for the Tanchyanga ethnic community, distribution of study subjects were also found equal in terms of normal and obese.

Hygiene Practice among respondents is shown in Table 3. Forty one percent of the respondents were used to washing their hand with soap before taking meal while rest of the respondents (59%) were found to be used to washing their hand with water only before taking their meal. Fifty nine percent of the respondents were in the practice of washing their hand with soap after toilet. All the subjects found to be in the practice of washing their hand before preparing food and washing their utensil. A relatively smaller number of respondents (34%) were found to practice reheating foods before serving.

Disease frequency (last 2 weeks) and health seeking behavior of the study subjects are shown in Table 4. Majority (89%) of the respondents was found not to suffer from any disease during the last two weeks of interview. Majority of the subjects (48%) were found to seek health care facilities from Govt hospital, even though 17% of the respondents were found to seek health care facility from Rural Medical Practitioner (RMP)/ Traditional healer/ Boiddya.

Table 1: Socioeconomic characteristics of study subjects (n=227)

Parameters	
Age (M±SD) (years)	35±15
Religion	
Muslim	2% (4)
Buddhist	52% (119)
Christian	26% (58)
Crama	17% (38)
Hindu	3% (8)
Education of respondents	
No schooling	54% (122)
Primary	13% (29)
Upto Higher Secondary	27% (62)
Graduate	6% (14)
Post-graduate	0% (0)
Sex	
Male	73% (165)
Female	27% (62)
Occupation of respondents	
Housewife	15% (33)
Agriculture	27% (62)
Business	13% (30)
Service	13% (30)
Student	24% (55)
Day labor	8% (17)
Ethnicity	
Marma	52% (117)
Tripura	3% (6)
Tanchyaga	2% (4)
Murong	18% (40)
Bawm	21% (48)
Khyang	3% (10)
Chak	1% (2)
Monthly income(BDT)	
Lower income (< 5360)	45% (101)
Lower middle income (5360-21270)	49% (112)
Upper middle income (21271-65761)	6% (14)

Figure1: Nutritional status of study subjects (n=227)

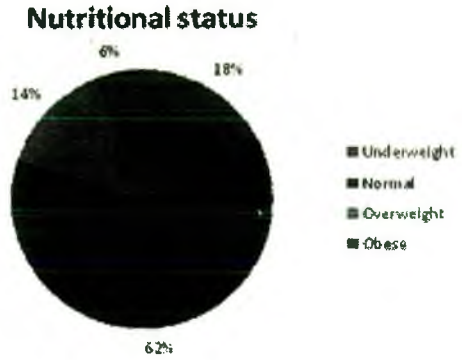

Table 2: Nutritional status of different ethnic communities (n=227)

Ethnicity	Nutritional Status as % (n)				Total
	Underweight	Normal	Overweight	Obese	
Marma	21% (24)	56% (65)	15% (18)	9%(10)	51% (117)
Tripura	34% (2)	33% (2)	33% (2)	0%(0)	3% (6)
Tanchyanga	0% (0)	50% (2)	0% (0)	50% (2)	2% (4)
Murong	25% (12)	71% (34)	5% (2)	0% (0)	21% (48)
Bawm	4% (2)	77% (37)	15% (7)	4% (2)	21% (48)
Khyang	0% (0)	100% (2)	0% (0)	0% (0)	1% (2)
Chak	0% (0)	0% (0)	100% (2)	0% (0)	1% (2)
Total	18% (40)	62% (142)	14% (31)	6% (14)	100% (227)

Table 3: Hygiene practice among the respondents (n=227)

Steps taken for maintain hygiene	**% (n)**
Hand washing before taking meal:	
Water only	59% (133)
Soap	41% (94)
Hand wash after toileting:	
Water	41% (94)
Soap	59% (133)
Wash hand before preparing food:	100% (227)
Before taking food wash utensil:	100% (227)
Covered food:	
Yes	99% (225)
No	1% (2)
Reheating foods before serving:	
Yes	34% (76)
No	66% (151)

Table 4: Disease frequency (last 2 weeks) and health seeking behavior of the study subjects (n= 227)

Characteristics	% (n)
Illness	
Fever	6% (15)
Diarrhea	2% (4)
Acute respiratory infection	3% (6)
No disease	89% (202)
Health seeking behavior	
Govt. hospital	48% (109)
NGO hospital/clinic	35% (80)
RMP/Traditional healer/Boiddya	17% (38)

Discussion

This cross sectional study was conducted to determine nutritional status and hygiene practice as well as disease frequency among ethnic communities in selected area of Bangladesh who are surviving as minor population in our country. In this study, majority of the study subjects found middle aged. The present study also showed that more people were male than female. It is also positively noted from this study that most of ethnic people were found with normal nutritional status in Bangladesh but another study in India conducted among tribal groups residing in different parts of India found that high prevalence of under nutrition were still exists there which influence health and nutritional status in non satisfactory level.[13,15] In our country, so many donor driven projects may influence for the betterment of nutritional status and lifestyle issues of this tribal population [14] which reflected as outcome in our study. In the current study, hygiene practices such as washing hand after toileting, before preparing food, washing utensils before taking food and food covering habit found very satisfactory level except two components such as hand washing before taking meal and food reheating habit before serving. In light of better nutritional status of tribal population discovered in this study, majority of study subjects were found with no disease during last two weeks of interview. It is also come to light that a large proportion of respondents (45%) normally get their health facility from Government hospital which was very much similar to another study conducted by Mullah S MA; Parveen N, Ahshanullah M..[1] Although the nutritional status and hygiene practice found quite satisfactory, further measure should be taken to improve their nutritional status. Effective and targeted health and nutrition education program regarding nutrition and hygiene among tribal population in our country could be undertaken for their better nutritional status. Educational campaigns may promote better health compliance by improving awareness among the tribal community who are lagging behind.

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