

Maternal Factors Causing Under-Nutrition among the under-Five Slum Children in Dhaka City

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This cross sectional study conducted among 128 respondents (mother with <5 children) of two selected Slums of Dhaka. To assess the relationship between maternal factors and child nutrition status among under-five slum children. Anthropometric measurement was made for the study group. Weight and height measurement were made following standard technique 5 using weighing scale and anthropometer rod to the precession of 0.5 kg and 0.1 cm respectively. Underweight, stunting and wasting were defined as weight for age (WAZ), height for age (HAZ) and weight for height (WHZ) in Z-score. The WHO classification was followed for assessing severity of malnutrition by percentage prevalence ranges of these three indicators among children. Socioeconomic background information was obtained by interview the mothers (respondents) by using a semi structured questionnaire. The prevalence of under nutrition among study sample was 70.3% weight for age (WAZ), 19.5% by height for age (HAZ), and 10.0% by weight for height (WHZ). Potential factors were examined family characteristics mothers age, educational background, family size, marital status, mother's occupation, husband's occupation, family occupation. Children characteristics such as age, gender, birth, immunization status, history of illness, mother's knowledge and perception of under nutrition and food practice. It is believed that maternal factors are associated with malnutrition of under-five children. It remains a threat to the health of the slum children. This finding should not be overlooked and counter measures are indicated. Out of 128 respondents 32.8% was in the 26-30 years age group, 21.9% were in the 21-25 years age group 18.7% were in the 31-35 years age group 15.6% was in the 16-20 age group. Mean age 27.5. S.D-6.3. regarding occupation 65.7% were housewife, 18.8% were maid servant, 6.2% were day labor. Of the respondents 82.8% were illiterate only 17.2% had primary level education. Study also shows that regarding family members 62.5% have 4-6 family members. 28.1% had less than 4 family members and 9.4% had more than 7 family members. Regarding number of children 39.1% had 3-4 children and 53.1% had 1-2 children. Regarding occupation of the respondent's husbands 53.1% were day labor, 33.1% were in business and 12.5% were in service. Of the respondents 57.8% had monthly income between 2000-3000 Taka, 14% had 1000-2000 taka and 26.6% had monthly income of more than 3000 taka. Of the respondents 46.9% had EPI card for their child and 53.1% had no EPI card. All these socio demographic factors associated with under nutrition of slum children.

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Introduction

Malnutrition has been persistent problem for the poverty stricken country. The World Bank estimate that Bangladesh is ranked 1st in the world of the number of children suffering from malnutrition. In Bangladesh 26% of the population undernourished, 46% children is underweight and 43% is stunted.¹ According to "Daily independent" 17th November, 2011 stated that more than 2 million children live in slum of Dhaka. Children and women in slum frequently suffer from some form of malnutrition. Most of child parents live in slum day labor, maid servant, rickshaw puller, van puller, hawkers and beggars. Slums are heavily populated urban areas characterized by poverty, substandard or non existing housing with poor sanitation, lack of water supply and lack of cooking facilities. According to ICDDR'B in Bangladesh 41% children age under 5 suffers from under nutrition.² Malnutrition is a condition that results from taking an unbalanced diet in which certain nutrients are lacking, in excess or in the wrong proportion.² In most of the world malnutrition is present in the form of under nutrition which is caused by diet lacking adequate calories and protein. Malnutrition is more common in developing countries like Bangladesh. There are many nutritional problems which verse segment of our population. It begins quite commonly in the womb and ends in the grave. Lack of food is not only the cause of under nutrition. Too often there is starvation in the midst of plenty. Under nutrition is largely the byproduct of poverty, ignorance, insufficient education, inadequate sanitary environment, large family size etc. These factors relate most directly on the quality of life and are the true determinants of under nutrition in the society. In short cause of under nutrition is built into the very nature of society, in the

socioeconomic and political structure both nationally and internationally.

Methods

A cross sectional study was undertaken with the objective to find out the maternal factors causing under nutrition of children less than five years in selected slum area of Dhaka city during 1st July to 30th September, 2009. A total of 128 mothers (respondents) and child were included in this study. These mothers were found during the period of 4-6 PM. Thus the technique is of sampling was purposive. Data were collected from the respondent (mother) by researcher himself through face to face interview and observation. After collection of data master sheet was prepared first for the purpose of tabulation. The data were processed manually and tabulation according to the key variable.

Results

Age group of the respondents is shows in the table I. Majority of the respondents were in age group of 26-30 years. The mean age was 27.5 years with SD 6.3. Majority of the respondents were housewives (Table II). Majority of husbands of the respondents were day labor (Table III). Out of 128 respondents 82.8% were illiterate, 17.2% had primary education. Married respondents were 124 (96.9%) and 4 (3.1%) were separated. Family size distribution is shown in the table IV. Average size of the family was 4.7. Number of children of the respondents is shown in the table V. Average number of children in the family was 2.7.

Table I: Distributaries of the respondents according to their age

Age	Number	Percentage (%)
16-20 yrs	20	15.6
21-25 yrs	28	21.9
26-30 yrs	42	32.8
31-35 yrs	24	18.7
36-40 yrs	10	7.9
41+ yrs	4	3.1
Total	128	100

Table II: Distribution of the respondents according to their occupation

Occupation	Number	Percentage (%)
Housewife	84	65.7
Maid servant	24	18.8
Business	10	7.8
Day labor	8	6.2
Service	2	1.5
Other	0	0
Total	128	100

Table III: Distribution of the respondents according to their occupation of husband

Occupation	Number	Percentage (%)
Day labor	68	53.1
Business	40	31.3
Service	16	12.5
Others	4	3.1
Total	128	100

Table IV: Distribution of the respondents according to its family size

Family size	Number	Percentage (%)
<4	36	28.1
4-6	80	62.5
7+	12	9.4
Total	128	100

Table V: Distribution of the respondents according to their number of children

No of children in the family	Number	Percentage (%)
1-2 children	50	39.1
3-4 children	68	53.1
5-6 children	6	4.7
7+ children	4	3.1
Total	128	100

Respondents' range of monthly income status is shown in the table VI. Out of 128 respondents 68 (53.1%) had male children (11-23 month) and 60 (46.9%) had female children (1-23 month). Under-nutrited children in different age groups is shown in the table VII.

Table VI: Distribution of the respondents according to their monthly income of the family

Monthly income	Number	Percentage (%)
500- 1000	2	1.6
1001-2000	18	14.0
2001-3000	74	57.8
3001+	34	26.6
Total	128	100

Table VII: Age distribution of under-nourished slum children

Age of children	Number	Percentage (%)
0-1 years	40	31.2
1-2 years	24	18.8
3-4 years	28	21.8
4-5 years	36	28.2
Total	128	100

EPI Card was retained in 68 (53.1%) of respondents while 60 (46.9%) could not show the card. Factors causing under-nutrition has been shown in the table VIII.

Table VIII: Factors causes under nutrition

Factors (variable)	Number	Percentage (%)
Lack of food	30	23.4
Lack of knowledge of food (mother)	40	30.0
Illness of child	20	15.6
Poor maternal health	10	7.8
Number of children	56	43.7
Poor income	92	71.8
Large family size	80	62.5
Poor sanitation	120	93.7

Discussion

Under-five slum children under nutrition is a great problem in Bangladesh. Recent study from slum Africa, Asia have study the problem of childhood under nutrition. Although, many study done in Bangladesh slum, here is no data available on the level of under-nutrition as determined using the WHO standard among the slum children. The present study reported very high rate of under weight among the slum children. It is well established that under nutrition continues to be the primary cause of ill health and premature mortality among the children in developing countries. Chronic under nutrition in childhood is linked with slower cognitive development and serious health impairment of the later in life that reduced the quality of people. This study shows that mothers age, occupation, education, illness of mother knowledge about nutrition and food practice are associated with under nutrition of <5 children. Major causes of are lack of food and lack of knowledge of food 23.4% and 15.6%. Again almost an equal number 15.6% were due to illness of child, 7.8% were due to poor maternal health. The study shows that socio demographic and socioeconomic conditions of the respondent were poor that is the main causes of under nutrition of slum children.

A study conducted in Nghean, Vietnam in 2007.³ It was found that region of residence, mothers occupation, household size, number of children in family, poor knowledge of mothers about nutrition are significantly related to under nutrition.

The current study also gives an overall picture which shows, residence, mothers knowledge, education, occupation, monthly income all these socioeconomic factors are influential to nutritional status of the slum children. A case control study on maternal knowledge of malnutrition and healthcare seeking attitude in rural south India conducted by Saito et al

suggested that the gender of the child and socioeconomic factors were stronger risk factor for malnutrition than healthcare availability and healthcare seeking attitude.⁴ The father's occupation was a more accurate indicator for malnutrition than household income.

Study conducted by Reed et al the effect of maternal education on child nutrition.⁵ Division of nutritional science, Cornell university, New York USA. They found association between maternal education and child nutritional status. Study done by Ali et al also found association of literacy of mother and malnutrition of the slum children.⁶ Study by Thito et al. in Nairobi, University of Nairobi, Kenya found that maternal factors are an underline cause of slum children malnutrition.² In general sanitation housing condition and water supply is very poor and inadequate.

Conclusion

Reviewing the finding of the study it was concluded that majority of respondent were in the age group of 26-30 yrs and their occupation was housewife. Most of the respondents were illiterate. Family size of the respondents 4 to 6 in numbers. A good Number of husband of the respondents were daily labor. Monthly incomes of the majority of the family were low. So all this low socioeconomic factors and socio demographic condition of responded are the main factor which causes malnutrition of the children. In the present study it is also seen that good number of responded also told lack of food and lack of knowledge of food and nutrition is the cause of malnutrition. A good number of respondents could not show EPI cards at the time of interview. The present study show that illnesses of child was main causes of malnutrition (under nutrition). Maternal factors are an under line cause of childhood malnutrition. More awareness among the slum people about nutrition, malnutrition and

under nutrition may be made by using different methods and media of effective communication. Slum people should be made more conscious through health education by Health and Family Planning and NGO workers. In collaboration with DCC Government and NGO may take extensive measure to make the program more acceptable among slum people. Simple type of medical canters may be established to provide Medicare and nutrition among the slum children. Relief goods may be distributed among the children at the time of medical center. This will attract the mother to bring their children at medical centers. Adult education program in the slum area may help to awareness among the nutrition, malnutrition and under nutrition. Nutrition intervention program to be launched to the slum children. Improvement of sanitation and safe water supply should be given.

References

1. Institute of Nutrition and Food Science, University of Dhaka, Nutrition Survey of Rural Bangladesh; 1975-76, 1977.
2. Thito FM et al. (Child nutritional status and maternal factors in urban slum) in Nairobi, University of Nairobi, Kenya.
3. Nguyen Ngoc Hien, Ngyen Ngoc Hoa, Nutritional status and determinants of Malnutrition in Children under Three Years of Age in Nighean, Vietnam. Pakistan Journal of Nutrition, Vol-8, issue no- 7, Page-958, 2009.
4. Saito K et al. maternal knowledge on malnutrition and healthcare seeking attitude in rural south India.
5. Reed BA et al. effect of maternal education on child nutrition. Division of nutritional science, Cornell University, New York, USA.
6. Ali SS, Karim N, Haider SS J. Pak. Med Asso. 2005; 55(12):550.