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Original Research Article

Association between Breastfeeding Practices and Nutritional Status of Children Aged 6-24 Months in Jessore, Bangladesh

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ABSTRACT

Background: Breast milk has a major impact on child health, growth and development. Childhood malnutrition remains one of the most challenging global public health problems especially in developing country.
Aim and objective: To determine the breast feeding practices and nutritional status of the children aged six to twenty four months, and find out association between breast feeding practices and nutritional status of the children.
Methods: A cross-sectional descriptive study was conducted among 312 children aged 6-24 month in the 10 community clinic of Jessore Sadar. Data was collected by using self-administrated questionnaire and anthropometric tools. Data was analyzed by using WHO Anthro and SPSS version 16.0 software.
Results: About 55% respondents were male and rests was female and mean age was14.8±2.3 months. 86% children got early initiation of breastfeeding and 56.73% children were exclusively breastfed. About seventeen percent respondents were born with low birth weight in the study area. It was found that 37.82%, 13.14% and 29.49% children were stunted, wasted and underweight respectively. There was a significant association between early initiation of breastfeeding and wasting (p= 0.047) and under-weight (p= 0.001), on the other hand exclusively breastfeeding (up to 6 months) and stunting (p= 0.033) and under-weight (p= 0.025).
Conclusion: Lack of early initiation of breastfeeding and exclusively breastfeeding for the first six months was major risk factors to malnutrition among children less than twenty four months of age. A behavior change communication program about the importance of exclusive breastfeeding for first six months of age should be implemented for its contribution to healthy growth and development of child.

Key words: Breastfeeding practice, Nutritional status, Community clinic, Children aged 6-24 months

INTRODUCTION

Breastfeeding is an important way of providing ideal food for healthy growth and development of infants and children. As a global public recommendation, infants should be exclusively breastfed for the first six months of life to achieve optimal growth, development and health. [1] Poor feeding practices during the first two years of life have both immediate and long-term consequences. It is estimated that inappropriate feeding of children is responsible for about one-third of the cases of malnutrition world-wide. [2]

During the early days after delivery breastfeeding provides the baby with the benefits of colostrum. Colostrum is the pre-milk substance secreted by the breasts, until milk is produced usually about the second or third postpartum day. It is rich in all

baby's essential need like vitamins, nutrients, fluids and substances that prevent infections and allergies. Breast milk provides all the nutrient and vitamins that the baby needs at least for the first six months after birth. [3] Breast milk contains immunologic factors and antibodies that help to prevent a host of diseases. Antibodies are immune substances in blood and body fluids effective in fighting infections and other foreign substances in the blood. In developing countries, the lack of exclusive breastfeeding for six months and absence of breastfeeding for infants 6 to 23 months old is associated with higher risk of diarrheal infections and associated morbidity and mortality. [4] This is substantial, given that diarrheal diseases are the second leading cause of death for children under 5 and are the cause of 1.34 million childhood deaths worldwide. [5] The immunological benefits of breast milk can help protect children from infection and prevent disease.

Studies have shown that inappropriate breastfeeding practices are associated with severe malnutrition and lack any advantage in terms of weight gain and are associated with growth faltering. [6] Malnutrition has significant health and economic consequences, which includes increased risk of death, illness and lower cognitive development among others. In Bangladesh, 43 percent of children under five are stunted, and 16 percent are severely stunted. Seventeen percent of children under five are wasted, and 3 percent are severely wasted. Weight-for-age results show that 41 percent of children under five are underweight, with 12 percent are severely underweight. [7] A study carried out in Dhaka city showed that 12 percent children had normal weight for age and 58 percent were suffering from moderate to severe underweight. The weight for age was normal in 39 percent children and 21 percent children were wasted. [8]

To determine the breast feeding practices and nutritional status of the children aged six to twenty four months, and find out the association of the breast feeding practices and nutritional status of the children, the recent study was carried out.

MATERIALS AND METHODS

Study area:

A cross-sectional descriptive study was conducted in Jessore, Bangladesh. The study was conducted in the 10 community clinic of Jessore Sadar.

Study population:

The study population comprised a couple of mother and child (6-24 months old) attending in the community clinic. The age category of children was chosen on basis of recommendations of the maximum total breastfeeding period of 24 months and beyond. The mothers were selected as the source of information since they are the first in line as far as breastfeeding is concerned.

Study Period:

The study was conducted in the period from June, 2016 to November, 2016.

Sample size:

Due to shortage of budget and time limitation we took 312 children from the study area.

Inclusion criteria:

Children of the age of 6 to 24 months whose were come to the community clinic for health facility.

Exclusion criteria:

Those who refused to give information and age above 24 months.

Study tools:

Four study tools were utilized. These were: a structured questionnaire; a Salter scale in kilograms and weighing to accuracy of 0.1 kilograms; a measuring length board graduated in centimeters, with a sliding foot piece was used to measure the length of the 6-24 months children; and child's national growth and monitoring chart was used to establish the child's date of birth. Data collection was conducted over a period of 3 months by face to face question and measurements.

Statistical Analysis

Data was entered and statistical analysis was done using WHO Anthro and

SPSS version 16.0. Descriptive statistics were expressed as frequency with percentage for categorical variables. Chi-square test was used to find the association between breastfeeding practice and malnutrition of the children. *P* value <0.05 was considered as statistically significant. Analyzed data was presented in the form of tables.

RESULTS

Table 1: Socio-demographic information of the children (N=312)

Variables	Frequency	Percentage (%)
Gender		
Male	172	55.13
Female	140	44.87
Total	312	100.00
Age in Months		
6-12	88	28.21
13-18	109	34.92
19-24	115	36.87
Total	312	100.00
Mean ± SD	14.8±2.3	
Mother's Education		
Illiterate	57	18.27
Primary	92	29.45
Secondary	142	45.51
Higher	21	6.73
Total	312	100.00
Monthly Family Income (Taka)		
<5000	43	13.78
5000-12000	104	33.33
13000-20000	132	42.31
>20000	33	10.58
Total	312	100.00

Table 1 shows that 55.13% respondents were male and rest were female. About twenty eight percent children were in age group 6-12 month, 34.92% and 36.87% children were in age group 13-18 and 19-24 month respectively. Majority of the children's mother education was secondary level (45.51%). 42.31% respondent's monthly family income was 13000-20000 Takas.

Table 2: Distribution of children according breastfeeding practices and LBW (N=312)

Variables	Frequency	Percentage (%)
Early Initiation of Breastfeeding		
Yes	268	85.90
No	44	14.10
Total	312	100.00
Exclusive Breastfeeding		
Yes	177	56.73
No	135	43.27
Total	312	100.00
Low Birth Weight (LBW)		
Yes	53	16.98
No	259	83.02
Total	312	100.00

Table 2 reveals that about 86% children got early initiation of breastfeeding and rest was not. 56.73% children were exclusively breastfed and 43.27% was deprived from exclusive breastfeeding. About seventeen percent respondents were born with low birth weight in the study area.

Table 3: Distribution of children by nutritional status (N=312)

Variables	Frequency	Percentage (%)
Stunting (Height for age)		
Stunted	118	37.82
Normal	194	62.18
Total	312	100.00
Wasting (Weight for height)		
Wasted	41	13.14
Normal	271	86.86
Total	312	100.00
Underweight (Weight for age)		
Underweight	92	29.49
Normal	220	70.51
Total	312	100.00

Table 3 indicates that 37.82% children were stunted and 13.14% were wasted. 29.49% children were underweight and rest was normal.

Table 4: Association between Breastfeeding practices and wasting (N=312)

Recommended breastfeeding practices		Normal % (N)	Wasting % (N)	*p* value
Early Initiation of Breastfeeding (Within 1 hour)	Yes	88.81 (238)	11.19 (30)	0.047
	No	75.00 (33)	25.00 (11)	
Exclusive Breastfeeding (Up to 6 months)	Yes	87.57 (155)	12.43 (22)	0.651
	No	85.93 (116)	14.07 (19)	

Table 4 reveals that 88.81% children were normal and 11.19% were wasted though they had early initiated of breastfeeding which was statistically significant (*p*= 0.047). About 12% and 14% children were wasted because of taking and avoiding exclusive breastfeeding respectively.

Table 5: Association between Breastfeeding practices and stunting (N=312)

Recommended breastfeeding practices		Normal % (N)	Stunting % (N)	*p* value
Early Initiation of Breastfeeding (Within 1 hour)	Yes	61.94 (166)	38.06(102)	0.518
	No	63.63 (28)	36.37(16)	
Exclusive Breastfeeding (Up to 6 months)	Yes	68.36 (121)	31.64 (56)	0.033
	No	54.07 (73)	45.93(62)	

Table 5 shows that thirty eight percent children were stunted even they were early initiated of breastfeeding. Thirty six percent children were stunted as they were not early initiated of breastfeeding. 68.36% and 31.64% children were normal and stunted respectively among exclusively breastfed. On the other hand 54.07% and 45.93% children were normal and stunted respectively among not exclusively breastfed which was statistically significant (p= 0.033).

Table 6: Association between Breastfeeding practices and under-weight (N=312)

Recommended breastfeeding practices		Normal % (N)	Underweight % (N)	*p* value
Early Initiation of Breastfeeding (Within 1 hour)	Yes	77.24 (207)	22.76 (61)	0.001
	No	29.55 (13)	70.45 (31)	
Exclusive Breastfeeding (Up to 6 months)	Yes	67.23 (119)	32.77 (58)	0.025
	No	74.81 (101)	25.19 (34)	

Table 6 shows that 22.76% children were underweight even they were early initiated of breastfeeding and 70.45% children were underweight as they were not early initiated of breastfeeding which was statistically significant (p= 0.001). 67.23% and 32.77% children were normal and underweight respectively among exclusively breastfed. On the other hand 74.81% and 25.19% children were normal and underweight respectively among not exclusively breastfed which was statistically significant (p= 0.025).

DISCUSSION

This study was conducted among 312 children to determine the breast feeding practices and nutritional status and find out the association of the breast feeding practices with nutritional status of those children. Mean age of the respondent was 14.8±2.3 months. 55.13% respondents were male and 42.31% respondent's monthly family income was 13000-20000 Takas.

In the present study it was observed that 85.90% mother initiated breastfeeding within one hour of childbirth; the proportion was higher than that of 55.1% in Nairobi and 52.3% in Kenya. [9] On the contrary, 0.3% infants in India were offered breastfeeding within 1 hour after delivery and 90.9% infants begun breastfeeding after 72 hours of delivery. [10] About 58% children had been exclusively breastfed for the first six months of life where as 14% of infants were exclusively breastfed in Kenya. [11]

In case of nutritional status 37.82% children were stunted, 13.14% were wasted and 29.49% children were underweight in the study area which is 43%, 17% and 41% in nationally respectively. [7] So the nutritional status of study area is better than the national level.

Failure to exclusively breast fed for the first six months was found to be a significant (p=0.033) risk factor to stunting; similar findings was reported by Muchina and Waithaka in Kenya. [11] Wasting was found related to failure of initiated breastfeeding within one hour of child birth (p=0.047) but no study was found that breastfeeding practices significantly risk factor to wasting. The risk of being underweight was higher among children who had not been exclusively breast fed for the first six months (p=0.025) and initiation of breastfeeding within one hour of child birth (p=0.001). According to a study done in western Kenya, children who were introduced to foods early had an increased risk of being underweight. [12] A strong association between severe malnutrition and lack of breastfeeding was reported by Owor in Kampala. [13]

CONCLUSION

The study explored that there is a strong relationship between breastfeeding practices and nutritional status of children. Under-weight is significantly related with initiation of breastfeeding within one hour of child birth and exclusively breast fed for the first six months. Wasting is also significantly related with exclusively breast fed for the first six months. Awareness about importance of breastfeeding should be spread among mass population to enhance nutritional status of the children.

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