

Pattern of Complementary Feeding among Mothers Having Child Aged 6 to 12 Months

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Abstract

Background: Infant feeding practices play a crucial role in determining a child's rate of growth and development. Improper feeding practices have not only continued to jeopardize the nutritional status of Bangladeshi Children but also the well being of millions of children all over the world. **Objective:** The aim of the study was to assess pattern of complementary feeding among mothers having child aged 6 to 12 months. **Materials and method:** This was a cross sectional study conducted among 125 mothers having child aged 6 to 12 months. Purposive sampling method was used and pretested structured questionnaire was used to collect data by face to face interview. Prior data collection verbal consent was taken from respondents. **Results:** Mean age of the infants was 9.95 ± 2.046 months. Maximum 24% of the mothers were educated up to class VI-IX. About 47.2% mother introduced complementary feeding at 6th month to their infants. Among the age group of 6 to 8 months 13.9%, 44.4%, 30.6% and 11.1% children received meal for 1-2 times/day, 3-4 times/day, 5-6 times/day and more than 6 times/day respectively. In 6-8 months age group 52.8%, 19.4%, 16.7%, 8.3% and 2.8% were given semi solid and liquid, semi solid and solid, liquid, semi solid, and solid respectively. Besides 64% respondents gave 'Rice/Rice Powder/Suzy' as complementary feeding, 60% received 'khichuri', and 4.85% gave non-infant formulae. **Conclusion:** Overall pattern of complementary feeding was not satisfactory. Further large scale study is needed to get actual picture.

Keywords: Pattern; complementary feeding; 6 to 12 months aged child.

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Introduction

Growth of all Infants from the age of six months onwards depends largely upon the provision of additional building materials supplied through complementary foods in order to help them grow

into healthy and active adults. They need to be fed on a diet that provides all the nutrients and energy required for normal growth; vitamins and minerals to alleviate their hidden hunger and keep them

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strong.¹ Complementary feeding has been defined as the provision of nutrient containing foods or liquids other than breast milk that includes both solid foods and infant formula.² This refers to the period during which an infant becomes accustomed to complementary foods or infant formula in addition to the routine breast milk. The amount, type and consistency of food depend on the age of the child. This is also called 'intermediately period'. In developing countries, it covers a period between four months to two years, when the incidence of malnutrition and deficiency disease is at highest.³ WHO recommends that infants start receiving complementary foods at 6 months of age in addition to breast milk, initially 2-3 times a day between 6-8 months, increasing to 3-4 times daily between 9-11 months and 12-24 months with additional nutritious snacks offered 1-2 times per day.⁴ Infant feeding practices play a crucial role in determining a child's rate of growth and development. A point of great concern among nutritionists and the professionals is that improper feeding practices have not only continued to jeopardize the nutritional status of Bangladeshi children but also the well being of millions of children all over the world. Introduction of timely, adequate and balanced complementary food is perhaps the most important single and direct remedial measure to combat infants' malnutrition. The education of the mother is also considered to have a great impact on infants' nutritional status. The more a mother is knowledgeable the more she shall be able to help her child to grow nutritionally healthy as a young adult.⁵ There were not enough studies on pattern on complementary feeding in our country. This study will be helpful to provide new information to the mothers and will help to make them aware about complementary feeding practice and help the policy makers to run a successful program.

Materials and method

Study design: This was a cross-sectional study conducted in a slum area of Mirpur, Dhaka, Bangladesh from June to September 2012.

Study population: Mothers who have infant aged between 6 to 12 months.

Sample size and sampling technique: A total of 125 samples were selected purposively to conduct this study.

Data collection tools and technique: Data were collected through face to face interview by using pre-tested structured questionnaire.

Ethical issue: Verbal informed consent was taken from positive respondents with maintaining their full autonomy.

Data processing and analysis: Collected data were checked and completed in a master sheet. Data were then analyzed by using SPSS version 17.0. Standard general statistical method was applied using computer for data analysis.

Results

Mean age of the infants was 9.95 ± 2.046 months and most of the infants (51%) were in 11-12 months age group (Table I).

Table I: Age distribution of the respondents (N=125)

Age of infant (months)	Male	Female
6-8 (n=36)	19 (15.2%)	17 (13.6%)
9-10 (n=25)	15 (12.0%)	10 (8.0%)
11-12 (64)	33 (26.4%)	31 (24.8%)
Mean±SD	9.95±2.046	

Socio-demographic characteristics of the respondents

About 24.8% of the respondents were educated up to class VI-IX, 12.8% were educated above graduate and only 7.2% were graduate. A large proportion (85.6%) of the respondents was housewives and 8% were private service holder. The highest proportion (48.8%) of families had 3 to 4 members and the lowest proportion (5.6%) of families had 9 and more family members. Majority (41.6%) of the families earned TK 10000-20000 and only 10.4% of families earned TK 20001-30000 per month (Table II).

Table II: Socio-demographic characteristics (N=125)

Variables	Frequency	Percent
Education		
Illiterate	10	8
Class I-V	18	14.4
Class VI-IX	31	24.8
SSC	23	18.4
HSC	18	14.4
Graduate	9	7.2
Above graduate	16	12.8
Occupation		
Housewife	107	85.6
Govt. Service	4	3.2
Private Service	10	8
Others	4	3.2
Family member		
3-4	61	48.8
5-6	45	36
7-8	12	9.6
9 and more	7	5.6
Family income (BDT)		
0-10000	42	33.6
10001-20000	52	41.6
20001-30000	13	10.4
>30000	18	14.4

Pattern of complementary feeding

Maximum respondents (47.2%) introduced complementary feeding at 6 month to their infants. On the other hand 28.8% respondents introduced feeding before 6th months, 22.4% introduced complementary feeding at 7 to 8 months and 1.6% introduced after 8 months of age of their infants. Among the age group of 6 to 8 months, majority of the infants (44.4%) received meal 3-4 times/day, 30.6% received 5-6 times/day and few infants received either only 1-2 times/day or more than 6 times/day. Among the age group 9-11 months, most of the infants (52.0%) received meal 5-6 times/day which was 46.9% among the age group of 11-12 months. Infants of 6-8 months age group were mostly (52.8%) given semi solid and liquid, which was 32% in 9-10 months age group and 31.3% in 11 to 12 months age group. Most of the (64%) infants had 'Rice/Rice Powder/Suzy' as complementary feeding, 60% received khichuri, 44.0% received pulse, 36.0% had vegetables, 32% had egg in meal and the least, 4.85% had non-infant formula milk. For most of the infants (59.2%) meal had been prepared separately, 13.6% had family food and 27.2% infants had both.

Table III: Pattern of complementary feeding (N=125)

Variables	Frequency	Percent			
Current feeding					
Breast milk with other foods	105	84			
Only other foods	20	16			
Starting age (months) of CF					
< 6 months	36	28.8			
at 6 th month	59	47.2			
>6 months	30	24			
Age and frequency of meal					
Age (months)	1-2 times/day	3-4 times/day	5-6 times/day	More than 6 times/day	
	n %	n %	n %	n %	
6-8	5 13.9	16 44.4	11 30.6	4 11.1	
9-10	4 16.0	4 16.0	13 52.0	4 16.0	
11-12	6 9.4	20 31.3	30 46.9	8 12.5	
Age and consistency of food					
Age (months)	Solid	Semi solid	Liquid	Semi solid and liquid	Semi solid and solid
	n %	n %	n %	n %	n %
6-8	1 2.8	3 8.3	6 16.7	19 52.8	7 19.4
9-10	2 8.0	5 20.0	3 12.0	7 28.0	8 32.0
11-12	16 25.0	12 18.8	2 3.1	14 21.9	20 31.3
Preference of food items as CF					
Food Items	Frequency	Percent			
Infant formula milk	45	36.0			
Non-Infant formula milk	6	4.8			
Cow's milk/Goat milk	24	19.2			
Rice/Rice Powder/Suzy	80	64			
Infant formula cereals	47	37.6			
Fruits	31	24.8			
Khichuri	76	60.8			
Pulse (dal)	55	44.0			
Meat	31	24.8			
Fish	50	40.0			
Egg	40	32			
Vegetables	45	36.0			
Source of complementary food					
Family food	17	13.6			
Prepared separately	74	59.2			
Both	34	27.2			

Discussion

Infants are the vulnerable group in our population. In this study maximum respondents (85%) were giving breast milk along with other foods to their infants whereas 16% found to give only other foods. About 47.2% of the mothers started complementary feeding to their infants at 6 months and the percentage of too early start and delayed introduction of complementary feeding was 28.8% and 24% respectively. A study addressing the nutritional status in a National Nutrition Programme in Bangladesh showed that timely

complementary feeding was given to 83% of infants and 16.9% of mothers started complementary feeding at an early age.⁶ In the present study the early starting of complementary feeding rate was 28.8%. A study done several years back by Aggarwal et al.⁷ showed that only 17.5% of mothers had started complementary feeding at the recommended time which might reflect the fact that by this time awareness about complementary feeding has improved much.

A study of complementary feeding practices among mothers of some selected slums of Dhaka city done by Saleh et al.⁸ reported that in 9-11 months of age group about 70% mothers gave complementary foods twice a day to their children which was 16% in this study and 52% infants had meal 5-6 times/day. The frequency of complementary feeding was 3 times a day in 56% of the infants at 12-23 months of age.⁸ In our study, among the age group of 11-12 months 31.3% received meal 3-4 times/day.

In this study the most preferred (64.8%) food item given by the mothers was 'Rice/Rice powder/Suzy' and 'khichuri' was the second most common food which they gave along with pulse (44.0%), fish (40%), vegetables (36%), egg (32%), and meat (24%). The National Nutrition Programme also reported that consumption of rice and 'khichuri' was higher compared to meat, fish, and egg.⁶ Only 36% infants received infant formula in this study whereas a study among rural infants found it to be 72.7%.⁹

Most of the mothers prepared infant's food separately and only 13.6% practiced giving family food as per WHO recommendation.¹⁰ A large number of mothers (84%) were continuing breast milk along with other foods to their infants as per WHO recommendation¹⁰, the percentage is higher (93%) in the National Nutrition Programme.⁶

Conclusion

After the period of exclusive breastfeeding, the diet undergoes a change, from a single food - breast milk, to a variety of complementary foods

plus breast milk, to meet infants' nutritional requirements. This period is associated not only with increasing and changing nutrient requirements, but also with rapid growth, physiological maturation and development of the infant. Poor nutrition during this critical period of life may increase the risk of growth faltering and micronutrient deficiencies, and may have adverse effects on health and mental development. The prevalence of under nutrition among infants rises sharply between 6 and 11 months of age, providing stark evidence of poor complementary feeding. The complementary meals given to infants aged 6 to 11 months old rarely contain commonly eaten Bangladeshi foods which are rich in micronutrients and protein, such as fish, pulse and eggs and vegetables. As this study is done in a selected slum area of Dhaka, it might not be the representative picture of the complementary feeding pattern of Bangladesh in general. So further large scale study including representative samples should be carried out to get the real picture and future action plan.

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