

Infant and Young Child Feeding (IYCF) Practices by Rural Mothers of Bangladesh

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Abstract

A descriptive type of cross sectional study was carried out to assess the pattern of infant & young child feeding practices by the rural mothers of Bangladesh with a sample size of 450 during the months of January, 2015 to December, 2015. Out of 450 children, 51.1% are female & 48.9% are male. The proportions of infants with early initiation of breastfeeding (13.6%) and exclusive breastfeeding fewer than six months (57.3%) and infants who received complementary feeding at the age of 6-8 months (55.7%) were low. It showed that 90.4% of mothers have knowledge on exclusive breast feeding but only 57.3% of them have practiced it for 4-6 months. It further revealed that only 8.4% of mothers & 13.6% of fathers are illiterate. The main problems revealed from the study were late initiation of breastfeeding, low rates of exclusive breastfeeding and inappropriate complementary feeding practices. It further revealed that 69.3% of the respondents had two or less children and only 30.7% had three or more children.

Key words: Breastfeeding, Child-feeding practices, Cross-sectional studies, Exclusive breastfeeding, Infant-feeding practices, Complimentary feeding.

Introduction

Infant and young child feeding (IYCF) practices play vital role for the growth & development in the early months of life. The IYCF practice comprises by breastfeeding and complementary feeding, it has major role in determining the nutritional status of children. Poor feeding practices in infancy and early childhood results in malnutrition contribute to impaired cognitive and social development, poor school performance and reduce productivity in later life. Malnutrition has been responsible, directly or indirectly for 67% of all deaths among children less than 5 years of age in India¹. Reducing infant mortality is both an ethical obligation and a pre-requisite to achieve the Sustainable development goals (MDG-4). The important reasons for high infant mortality rate in Bangladesh are the diarrheal diseases, respiratory infection, low birth weight, congenital anomaly and malnutrition and also related with limited use of healthcare services and some community factors. Infants aged (0-5 months) who are not breastfed have 7-fold and 5-fold increased risks of death from diarrhea and pneumonia respectively^{2,3}. At the same age, nonexclusive rather than exclusive breastfeeding results in more than 2-fold increased risks of dying from diarrhea or pneumonia⁴. In Bangladesh, about 98% new born are traditionally fed "pre-lacteal feed (heating foods)" such as honey, sweeten water, or mustard oil with believe that these foods give strength and prevent colds during first few days of life & makes baby's voice sweet⁵. During first six months of life, breast milk should be fed alone and from then onwards it should be complemented with other sources of nutrition until at least 2 years of age⁶. WHO offers three recommendations for IYCF practices for children aged 6-23 months: (i) Continued breastfeeding or feeding with appropriate calcium-richen foods if not breastfed; (ii) feeding solid or semi-solid food for a minimum number of times per day according to age and breastfeeding status and (iii) including foods from a minimum number of food groups per day according to breastfeeding status⁷. The present study was therefore undertaken to determine and to identify the patterns and influencing factors of feeding practices in infant and young children of 0-2 years old in Bangladesh.

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Materials and Methods

This descriptive type of cross sectional study was conducted in 45 EPI Centers of ten upazilas of Dhaka, Gazipur, Kishoregonj, Feni and Chandpur districts with a sample size of 450 where sample size was estimated by the formula: $n = Z^2 p q / d^2$ by using purposive sampling technique to explore pattern of Infant and Young Child Feeding Practices by the rural mothers.

The study period was from January, 2015 to December, 2015. The mothers of children (aged 0-23 months) attending at EPI centers for immunization were included in this study. Data were collected by trained volunteers regarding IYCF perceptions and practices by interviewing the mothers using pre-designed, pre-tested, semi-structured interviewer administered questionnaire in Bengali. Only the mothers of children less than 24 (0-23) months were included in the study after obtaining verbal informed consent. Data analysis was done by standard statistical methods using the statistical software SPSS 13.0 for windows version.

Results

Table I shows the distribution of age and sex of the baby. Here it shows that 41.6% of the baby was in 13 to 24 months followed by 36.4% in 6 to 12 months and 22.0% in less than 6 months. Here it also shows that 51.1% of the children was girl and 48.9% was boy.

Table-I: Distribution of the baby by age and sex

Age of the baby	Frequency	Percent (%)
less than 6 months	99	22.0
6 to 12 months	164	36.4
13 to 24 months	187	41.6
Total	450	100.0
Gender of child		
Boy	220	48.9
Girl	230	51.1
Total	450	100.0

Figure I shows that 23.1% of mothers was in 18-20 years of age group, followed by 43.8 % was in 21 to 25 years, 23.8 % in 26-30 years, 7.3% was in 31 -35 years, respectively.

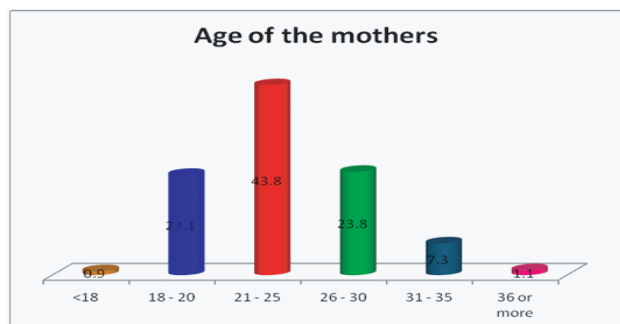


Figure -I: Distribution of the mothers by age

Table II shows that 26% of mothers & 17.1% of fathers are SSC pass or more respectively, on the other hand, only 8.4% of mothers & 13.6 % of fathers are illiterate.

Table -II: Distribution of the parents by educational status

Educational status	Mothers	Fathers
Illiterate	38 (8.4%)	61(13.6%)
Class V or less	84(18.7%)	122(27.1%)
Class VI - IX	211(46.9%)	190(42.2%)
SSC pass or more	117(26.0%)	77(17.1%)
Total	450	450

Figure II shows that majority of the respondents (91.8%) was housewife and only 5.3% was service holder.

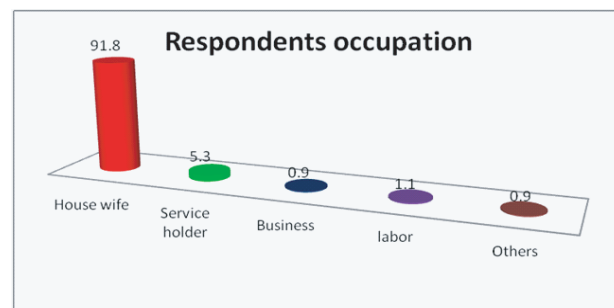


Figure -II: Distribution of the respondents by occupation

Figure III shows that half of the respondents (50.0 %) belongs to nuclear family, 40.4% in joint family and 9.6% lived in expanded family

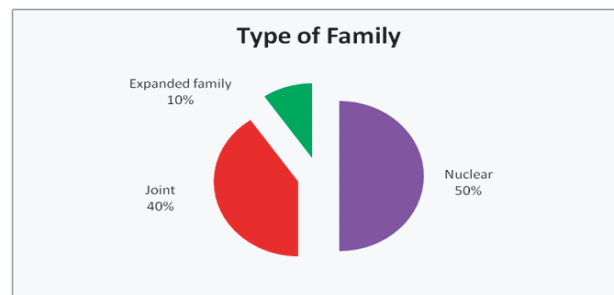


Figure -III: Distribution of the respondents by type of family

Figure IV shows that 69.3% of the respondents have two or less children and 30.7% have three or more children.

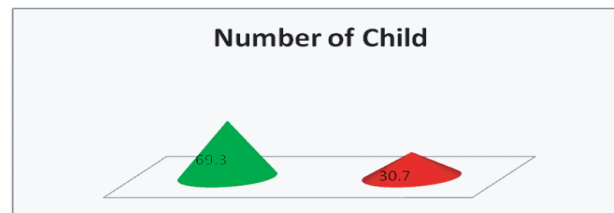


Figure -IV: Distribution of the respondents by number of children

Table III shows that 33.3% of the respondents monthly family income was BDT \leq 5000, 31.3% was 5001-10000. 14.9% was 10001-15,000 and 10.2% was 15001 to \leq 20000.

Table -III: Distribution of the respondents by monthly family income.

Monthly income (TK)	< 5,000	5,001-10,000	10,001-15,000	15,001- \geq 20,000
Frequency of family	150	162	142	46
% of family	33.3	31.3	14.9	10.2

Figure V shows that 73.8% of the respondents' got information from health workers followed by 10%, 8.2% and 8% from relative/family members, NGO workers and mass media respectively.

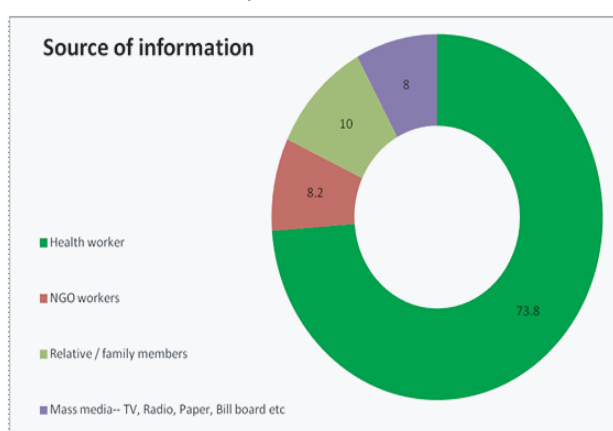


Figure-V: Distribution of the respondents by Source of information

Table IV shows, 94.7% of the respondents have knowledge on colostrums but 88.3% of them have practiced it, only 19.1% gave pre-lacteal meal to the baby; 75.8% of the respondents initiated breast milk in less than 1 hour followed by 21.3% in 1-12 hours, 2% in more than 24 hours and 0.9% in 13-24 hours respectively. Majority of the respondents (904%) had knowledge on exclusive breast feeding. 57.3% of the respondents fed exclusive breast feeding for 4-6 months, 14.7% for 9 months or more, 14% for less than 3 months, 8.7% for less than 1 month and 5.3% for 7-8 months. 1/3rd (37.3%) of the respondents fed their baby cow/powder milk with bottle and rest of them did not feed with bottle. Majority of the respondents (86.7%) had knowledge on complementary feeding. 71.12% of the respondents started complementary feeding in the months of 6-8 months, 11.11% before 6 months, 12.89% in 9-12 months and only 4.88% started it after 12 months 66.9% of the respondents had knowledge on preparation of complementary feeding.

Table -IV: Distribution of the respondents by Knowledge, Practices, feeding of pre-lacteal meal on colostrums.

Variables	Frequency	Percent
Knowledge on colostrums	426	94.7
Practices on colostrums	397	88.3
Feeding of pre lacteal meal	86	19.1
Initiation of breast milk in		
< 1 hr	341	75.8
1 --12 hr	96	21.3
13- 24 hr	4	00.9
> 24 hr	9	02.0
Knowledge on exclusive breast feeding	407	90.4
Duration of exclusive breast feeding		
Less than 1 month	39	8.7
Less than 3 months	63	14.0
Within 4-6 months	258	57.3
Within 7-8 months	24	5.3
Up to 9 months or more	66	14.7
Feeding withbottle	168	37.3
Knowledge on complementary feeding	390	86.7
Initiation of complementary feeding		
Before 6 months	50	11.11
Within 6 --8 months	320	71.12
Within 9 --12 months	58	12.89
After 12 months	22	4.88
Knowledge on preparation of complementary feeding	301	66.9

Table-V shows the knowledge on complementary feeding, 49.6% had knowledge on food grains, 55.6% had milk and milk products, 57.1% had meat, fish, poultry and liver, 52.2% had egg and its products, 47.3% had vitamin A richen fruits, vegetables and 50.4% respondents had knowledge on iron richen products.

Table -V: Distribution of the respondents by knowledge on complimentary feeding.

Knowledge on food made of	Yes		No	
	Frequency	%	Frequency	%
Food grains	223	49.6	227	50.4
Milk & milk products	250	55.6	200	44.5
Meat, fish, poultry, liver	257	57.1	193	42.9
Egg & its products	235	52.2	215	47.8
Vitamin A richen fruits, vegetables	213	47.3	237	52.6
Iron richen products	227	50.4	233	49.5

Discussion

Early initiation of breastfeeding, exclusive breastfeeding for six months, and timely introduction of complementary feeding are the key interventions to achieve the Sustainable Development Goal 1 and 4, which address child malnutrition and mortality respectively^{8,9}. The present study revealed that 41.6% of the children belong to group of 13-24 months, 36.4% to 6 - 12 months and only 22% to less than 6 months. Out of 450 children, 51.1% are female & 48.9% are male which correlates with census demography of Bangladesh. 69.3% of the mothers have only two or less children. 33.3% of respondents belonged to family income of TK less than 5000/ & only

10.2% to family income of TK more than 20,000. Initiation of breastfeeding within one hour of birth was more (75.8%) than the corresponding national (24.5%) figure of the NFHS 3 in India¹⁰. A study in Ghana reported that 22% of all neonatal deaths could be prevented if all women could initiate breastfeeding within one hour of delivery¹¹. The use of pre lacteal feeding was far less (19.1%) compared to the corresponding reported by Roy et al.¹². The corresponding figures were 8% in rural Bangladesh¹³ and 71% in urban Bangladesh¹⁴. The present study revealed that exclusive breastfeeding less than six months (57.1%) which is similar (58.6%) to the report of West Bengal of India¹⁵. The declining rate of exclusive breastfeeding with age was also reported in the NFHS 3 study in India^{11,15} and by Saha et al. in Bangladesh¹³ and Hop et al. in Viet Nam¹⁶ in longitudinal studies. Several studies showed that partial breastfeeding was associated with increased risk of child morbidity and mortality^{9, 17, 18}. Even introduction of plain water was reported to interfere with breastfeeding¹⁹. The proportion of bottle-feeding (37.3%) in the present study was comparable with results of a study by Wamani et al.²¹ but less than the reported by Pandey et al. from rural West Bengal, India²¹. Cousens et al. found that, when prolonged breastfeeding was accompanied with complementary solid foods, there was a reduction in clinical malnutrition²². It is worthwhile to note that the percentage of complementary feeding improved a lot (93.6%) at 9-11 months of age. Saha et al. and Hop et al. have corroborated the findings^{13, 16}. Studies in Malawi revealed that children who were given foods according to the time schedule recommended by the WHO were found to be well-nourished compared to children who received complementary feeding early²³. A study in Bangladesh documented that the frequency, amount, energy-density, and diversity of food remained important issues in complementary feeding²⁴. Factors, such as characteristics of diet or child's appetite, traditional beliefs and practices are known to influence the frequency of complementary feeding^{20, 21, 25,26}. As for inappropriate complementary feeding practices, late introduction, low frequency, and inadequate amount of solid or semi-solid food turned out to be the areas of main thrust.

In conclusion, in Bangladesh, two-thirds of all deaths in children aged less than one year caused by infectious diseases such as diarrhea and acute respiratory infections could be prevented by breastfeeding is well-documented. The protective effect of breastfeeding is most important in populations with high infant mortality, high illiteracy, poor sanitation facilities, poor nutritional status, and generally low economic status. The population of Bangladesh fits all of these criteria. Intervention programs should strive to improve conditions for enhancing current infant feeding recommendations, particularly in low-income conditions like Bangladesh.

Recommendations: The recommendation from the Global Strategy for Infant and Young Child Feeding Practices,

developed by World Health Organization (WHO) in collaboration with United Nations Children's Fund (UNICEF) should be implemented in Bangladesh, that-

1. Infants should be exclusively breastfed for the first six months of life.
2. After six months, infants should receive nutritionally-adequate and safe complementary foods while continuing to be breastfed for up to two years of age or beyond.
3. Make awareness raising initiatives for Infant and Young Child Feeding (IYCF) Practices from GO and NGOs capacities.

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