

Knowledge and Practice of Rural Mothers regarding Infant Feeding

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Abstract

Lack of detailed knowledge and improper feeding practice is one of the main reasons for malnutrition among infant. This descriptive study has been conducted in selected rural areas of Bangladesh to explore mothers' knowledge and practices regarding infant feeding to develop interventions in the socio-cultural context. Samples were selected conveniently. Discrepancy between knowledge and practice of mothers relating to infant feeding has been revealed in this study. 74.7% mothers were aware enough regarding exclusive breastfeeding practice up to 6 month of age of their infant. But 32% mothers practiced exclusive breastfeeding (EBF). Among non-exclusive mothers, 36 (24%) mothers started complementary feeding practice within three month of age. But 50% mother's opinion was on behalf of starting complementary feeding at 6 month of age. Insufficient breast milk and advice of family members played an important role in early initiation of complementary feeding practice. Thus remarkably high knowledge is depicting significant knowledge-practice discordance. Therefore, this work will be helpful to find out the gap between mothers knowledge and practice regarding infant feeding and to develop policies targeting mother's behaviors to enhance the healthy practice.

Keywords: *Infant, Exclusive breast feeding (EBF), Complementary feeding practices, Complementary food, Pre lacteal feeding.*

Background and Justification

Improper feeding practice is one of the main reasons for malnutrition among Bangladeshi children aged less than two years. Adequate nutrition during infancy and early childhood is essential to ensure growth, health, and development of children to their full potential. The World Health Organization (WHO) and United Nations Children's Fund (UNICEF) recommend exclusive breastfeeding (EBF) for six months, i.e. 180 days (Kramer MS, Kakuma R, 2001) and addition of nutritionally adequate and safe complementary foods at six months of age with continued breastfeeding till at least two years (Pan American Health Organization; 2002). Globally, optimal breastfeeding could prevent 13% of deaths of children aged less than five years while appropriate complementary feeding (CF) practices

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might result in an additional 6% reduction in under-five mortality (Lancet. 2003), especially in developing countries as ours. Malnutrition is an underlying factor in more than 50% of the major cause of infant mortality-Pneumonia, diarrhoeal disease and measles which account for 70% of infant mortality. Promotion of proper breastfeeding practices for the first six months of life is the most cost-effective intervention for reducing childhood morbidity and mortality. However, the adherence to breastfeeding recommendations in many developing countries is not satisfactory. Adequate nutrition during infancy is crucial for child survival, optimal growth and development throughout life [UNICEF, 1990]. The benefit of EBF for growth, immunity and prevention of illness in young infants is undisputable [Oddy WH2003 and Kalanda BF, 2006]. The importance of EBF for optimal growth and development, irrespective of country of residence, is also reflected in the recent WHO growth standard for children [WHO, 2009]. Introduction of foods other than breast milk before six months of life is not only undesirable, but could also be harmful [Lancet 2000]. These foods not only displace nutritious mother's milk, but also serve as a vehicle for infectious pathogens that can lead to severe illness.

Despite well-established guidelines for promotion of EBF, practice of EBF is quite low in many settings [BMC, 2007]. Childhood malnutrition and growth faltering affects more than half of children under five in developing countries, and usually starts during infancy, possibly due to improper breastfeeding and mixed feeding practices [He YN,2001]. Efforts to promote modest nutritional improvements such as changes in feeding behavior will have a beneficial impact on mortality rates over time. Feeding practices adopted by mothers depends on the knowledge, attitude and socio-cultural tradition they are exposed to [WHO; 2001]. Several studies have documented the impact of cultural factors, maternal age, marital status, family income/social class, mode of delivery, time of initiation of first breastfeeding and proximity to babies on feeding pattern [Vaahtera M, 2001]. However none of these studies could explore in details the difference between perceptions, understanding and overall knowledge regarding infant feeding and their actual practice. This study therefore tried to investigate the disparity between knowledge and practices of mothers about infant feeding as well as factors that influence the practice. The findings of this study will help public health professionals and social scientists to implement social and public health interventions to overcome this disparity.

Objective of the study

To assess mother's knowledge and practices regarding infant feeding in selected rural areas in Bangladesh.

Materials and Methods

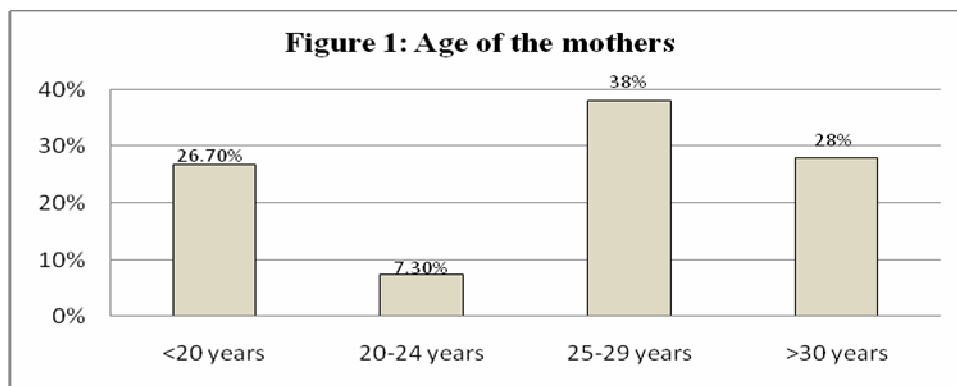
This study was descriptive in nature. This method has been chosen due to its versatility across public health disciplines and broad appeal to the administrator and policy analyst for planning, monitoring and evaluation. The study was carried out in Suti Para, Suapur and Nannar union under Dhamrai Upazila. In total, 150 mothers whose infant's age was six to twelve month were selected conveniently. The study was based on the basis of primary data. A pre-tested semi structured questionnaire was used to accomplish the purpose. Voluntary participation of the respondents as well as the confidentiality of their information was strictly maintained. Informal oral consent from each respondent was obtained. Findings were presented in narrative form with tables and graphs.

Results

The age range of the mothers was 19-38 years and 38% were in 25-29 years age group. 78% mothers were living in joint families. 68.7% mothers were Muslims hailed from middle income family. The other general features are presented in Table 1.

Table 1.1: Distribution of study population according to socio-demographic characteristics

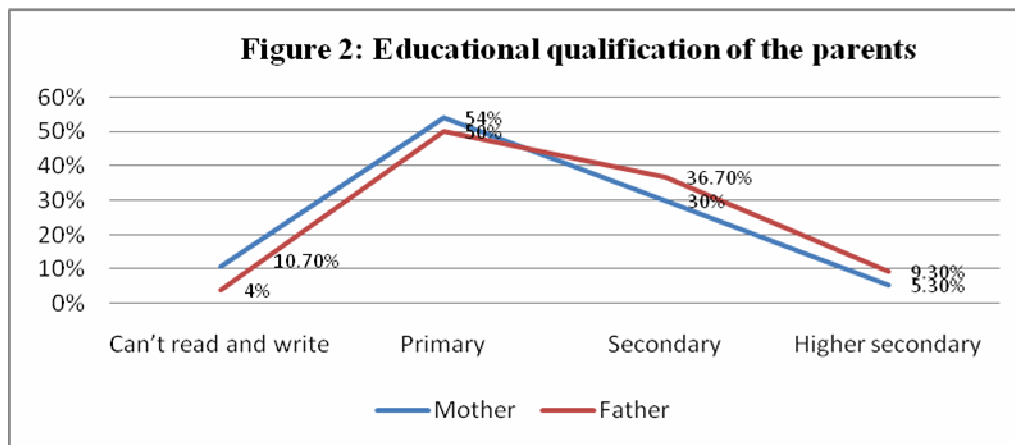
Socio-demographic Characteristics		Number (n)	Percentage (%)
Mother's Age	<20 years	40	26.7
	20-24 years	11	7.3
	25-29 years	57	38.0
	>30 years	42	28.0
Religion	Islam	103	68.7
	Hinduism	45	30.0
	Christianity	2	1.3
Family member	<5 members	35	23.3
	>5 members	115	76.7
Number of children	1	45	30.0
	2	71	47.3
	3 and above	34	22.7
Type of family	Nuclear	33	22.0
	Joint	117	78.0
Monthly family income	Low (up to 5000/-)	17	11.3
	Middle (6000-15,000/-)	106	70.7
	High (>15000/-)	27	18.0



Only 9.3% fathers had higher secondary level of schooling, while 54% of mothers had primary level of schooling. Day labor and service were the two most common occupations of the infant's fathers 34.7% and 24.7% respectively, while most of the mothers were engaged in household tasks e.g.95.3%.

Table 1.2: Distribution of study population according to socio-demographic characteristics

Socio-demographic Characteristics		Number (n)	Percentage (%)
Education of the mother	Can't read and write	16	10.7
	Primary	81	54.0
	Secondary	45	30.0
	Higher secondary	8	5.3
Education of the father	Can't read and write	6	4.0
	Primary	75	50.0
	Secondary	55	36.7
	Higher secondary	14	9.3
Occupation of the mother	House wife	143	95.3
	Day labor	4	2.7
	Service holder	2	1.3
	Others	1	0.7
Occupation of the father	Day labor	52	34.7
	Service holder	37	24.7
	Business	35	23.3
	Farmer	26	17.3



Mother's knowledge about infant feeding

46% mothers stated that the baby's first food should be Colostrum followed by sugar water (35.3%), honey (16.7%) and warm water (2%). Only fifty two percent (52%) mothers assumed that breastfeeding should be initiated within 1 hour, thirty three percent (33.3 %) mother thought this should be within 2-3 hours and 8% mother, around three percent (2.7%) mother & 4% mother stated first day, second day & third day or later respectively. Around seventy five percent (74.7%) mothers knew about exclusive breastfeeding practice up to 6 month of infant's age. They thought Sugar water (50.7%) and cow's milk (25.3%) are the two most commonly used prelacteal feeding. Near about two-third (64%) mothers stated that infant need fluids other than breast milk (pre-lacteals) for new born. Knowledge on patterns of prelacteal and colostrum feeding and initiation of breastfeeding after birth are presented in Table 2. Fifty percent (50%) mothers knew that complementary feeding should be started at 6 month of age. During illness of infant, 46% of the mothers thought that breastfeeding should be decreased.

Table 2: Distribution of study population according to knowledge on infant feeding

Mother's knowledge about infant feeding		Number (n)	Percentage (%)
First food of new born	Colostrum	69	46.0
	Warm water	3	2.0
	Sugar water	53	35.3
	Honey	25	16.7
Breast feeding initiation after birth	Within 1hour	78	52.0
	Within 2-3hours	50	33.3
	First day	12	8.0
	Second day	4	2.7
	Third day or later	6	4.0
Pre lacteal feeding	Yes	96	64.0
	No	54	36.0
Types of pre lacteal feeding	Warm water	13	8.7
	Sugar water	76	50.7
	Cow milk	38	25.3
	Honey	11	7.3
	Infant formula	7	4.7
	Fruit juice	5	3.3
Exclusive breast feeding up to 6 month	Yes	112	74.7
	No	38	25.3

Frequency of breast feeding per day	> 12 times	63	42.0
	<12 times	87	58.0
Initiation of complementary feeding practice	Within 3 month	26	17.3
	Before 6 month	49	32.7
	At 6 month	75	50.0
Breast feeding during illness	Stop	18	12.0
	Increase	14	9.3
	Decrease	69	46.0
	Same as before	49	32.7
Duration of breast feeding continuation	12 month	38	25.3
	24 month	85	56.7
	Beyond 24 month	27	18.0

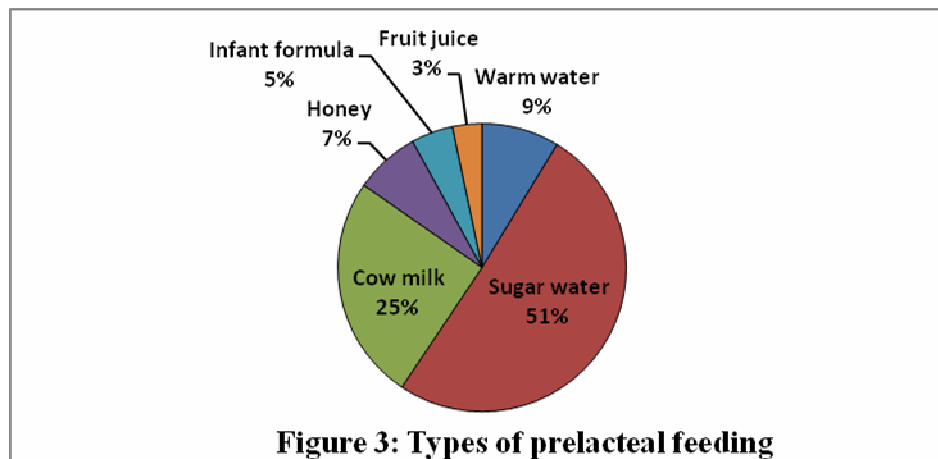


Figure 3: Types of prelacteal feeding

Mother's infant feeding practice

50.7% mothers practiced sugar water as the first feed to their newborns. Only 27.3% fed colostrums to their infants as first fed. Sugar water was given in 76 (50.7%) cases, Honey in 22 (14.7%), Warm water in 11(7.3%) of cases. Around thirty one percent (30.7%) mother initiated breastfeeding within 1 hour and about thirty seven percent (36.7%) mothers did within 2-3 hours. A total of 102 (68%) mothers introduced complementary foods (semi/solid or animal milk) before six months of age and the main reason was assumed insufficient breast milk production. The decision to give other foods before six months of age was taken by the mother herself (42%) and family members (58%) decided to do so for infants. Exclusive breastfeeding at 6 months was being practiced by 48 (32%) of the surveyed mothers. Amongst mother who were not practicing exclusive breast feeding, complementary feeding was introduced during these periods gradually by (24%), (44%) and (32%) of mothers within 3 month, before 6 month and at 6 month respectively. 42% mothers decreased and around eleven percent (10.7%) mothers stopped breast feeding during illness of infant.

Table 3: Distribution of study population according to practice of infant feeding

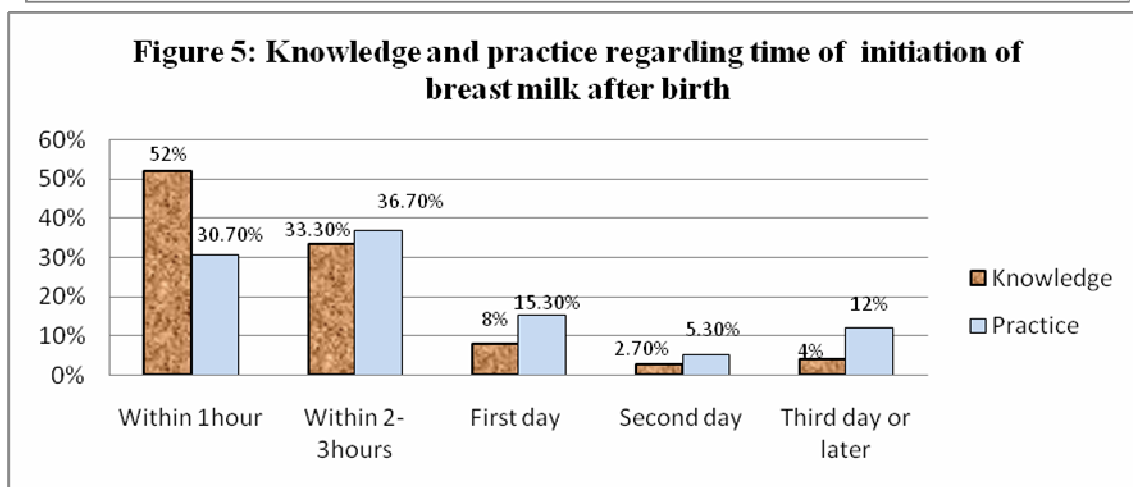
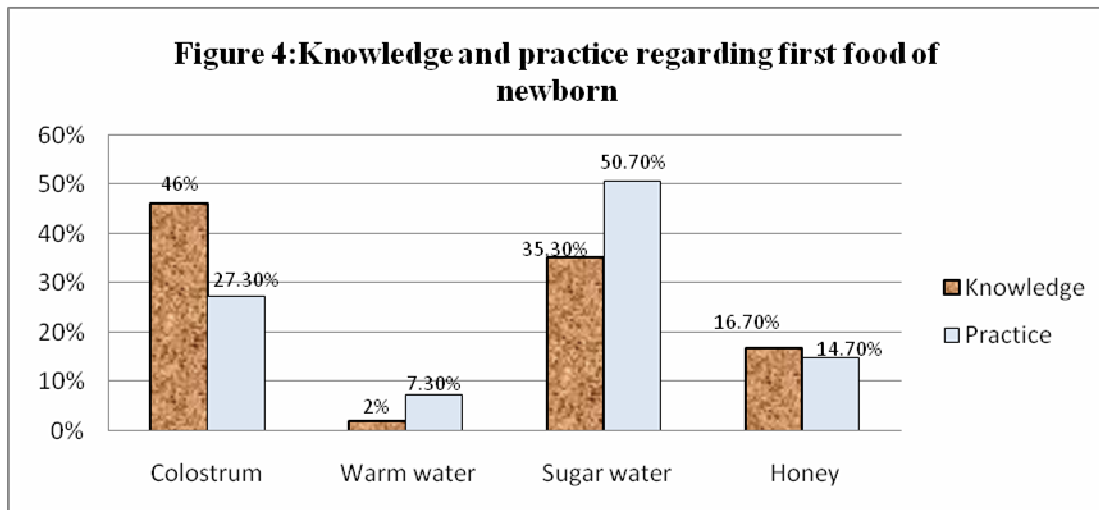
Mother's infant feeding practice	Number (n)	Percentage (%)	
First food of new born	Colostrum	41	27.3
	Warm water	11	7.3
	Sugar water	76	50.7
	Honey	22	14.7
Breast feeding initiation after birth	Within 1hour	46	30.7
	Within 2-3hours	55	36.7
	First day	23	15.3
	Second day	8	5.3
	Third day or later	18	12.0
Pre lacteal feeding	Yes	104	69.3
	No	46	30.7
Exclusive breast feeding practice up to 6 month	Yes	48	32.0
	No	102	68.0
Initiation of complementary feeding practice	Within 3 month	36	24.0
	Before 6 month	66	44.0
	At 6 month	48	32.0
Reasons of early initiation of complementary feeding	Insufficient breast milk	28	27.4
	Sickness of mothers	4	3.9
	Advice of family members	59	57.9
	Unknown	11	10.8
Breast feeding during illness	Stop	16	10.7
	Increase	14	9.3
	Decrease	63	42.0
	Same as before	57	38.0

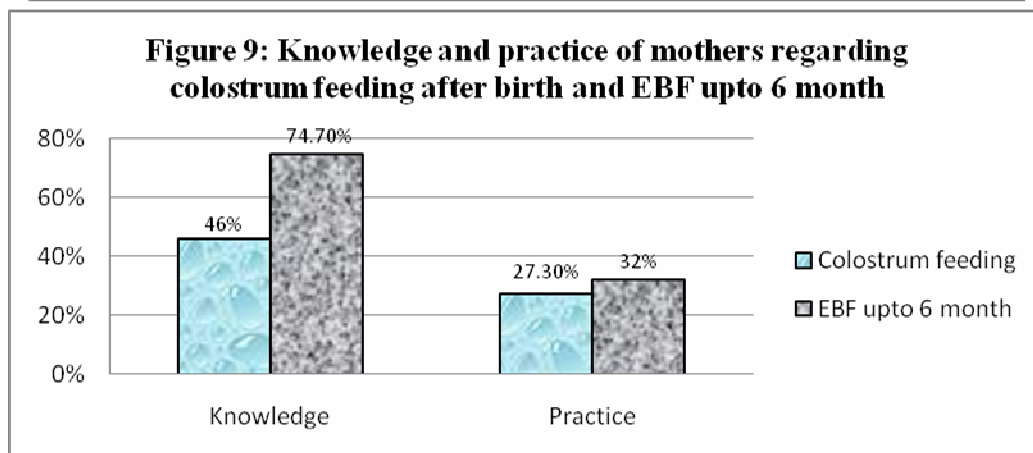
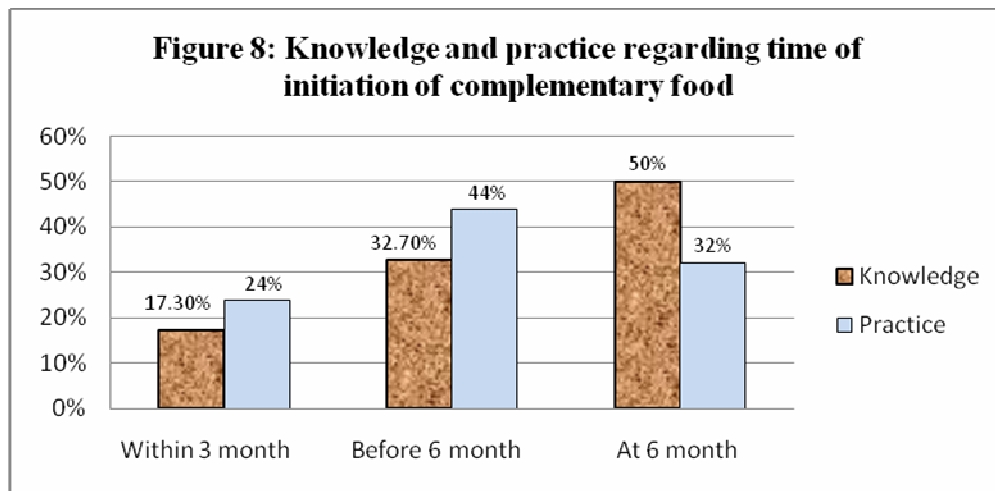
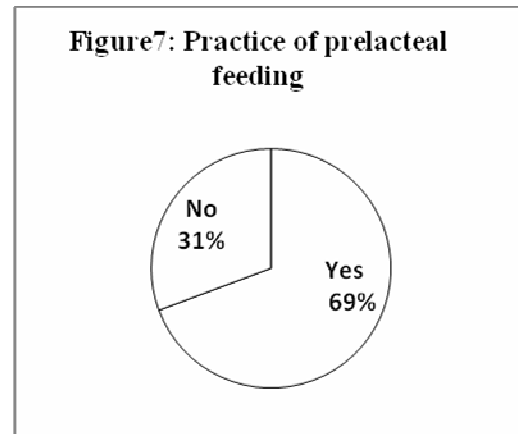
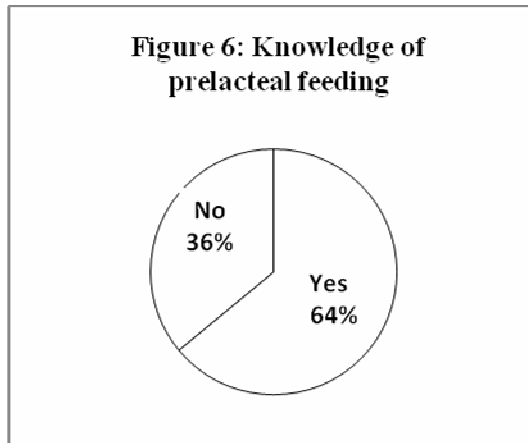
Table 4: Frequency of meal pattern of infant

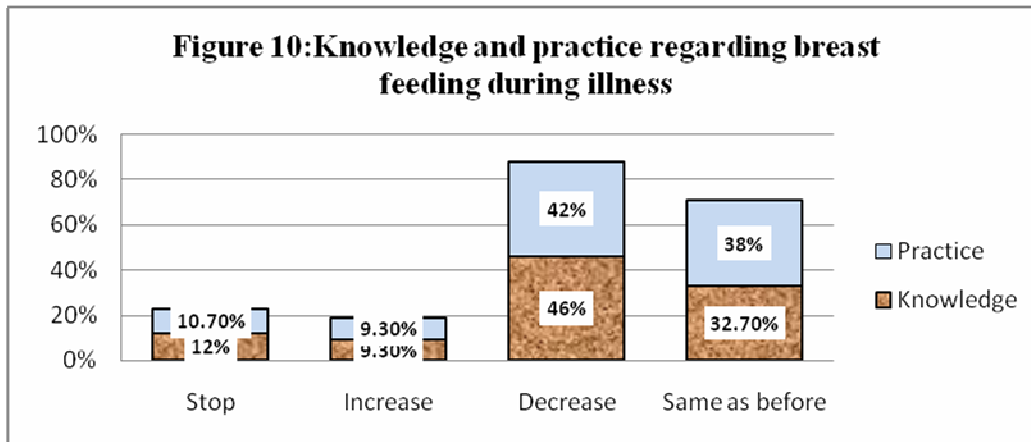
Age (completed months)	Frequency of meal pattern	
	2 times/day	3 times/day
6-9	30 (28.6%)	75 (71.4%)
10-12	16 (35.6%)	29 (64.4%)

Overall mother's Knowledge & Practices regarding infant feeding

The awareness and proper knowledge of infant feeding concept among mothers was high but its practice was distinctly lagging. It was evident from this study that awareness and knowledge do not equate to practice. Our mothers, probably, have not come to accept or understand the vital benefit of correct and appropriate feeding pattern and its practice. The disparity between mother's knowledge and practices are presented in the following figures:







Conclusion and recommendation

The findings of the study revealed that despite the high proportion of mothers who had proper knowledge on infant feeding did not initiate breastfeeding early after birth, the prevalence of EBF for up to six months of age was very low. Another study conducted in slums of Dhaka city revealed that only 23% of the study mothers practiced EBF. Similar results were found in an urban slum of Kolkata (Roy S, 2009). In a tertiary hospital in India where the rules and care of the newborn baby and mother were followed strictly, 63.5% of mothers exclusively breastfed their infants till six months of age (Aggarwal A, 2008). However, it was very common to start complementary food as early as from the first months of life. Early introduction of other foods/drinks including semi-solid foods was common. In the present study, 68% mothers started complementary feeding before recommended time. A study conducted in Dhaka city revealed that 23% of the mothers started CF at six months of age of their children. Another study in the tertiary hospital in India has shown that 17.5% of mothers started CF at the recommended time (Aggarwal A, 2008). In another study in Delhi slums, 16.6% of mothers started CF at the right time (Sethi V, 2003). At the same time, 80.3% of the children were started feeding early. Both these practices are unwanted. Results of a study in Malawi revealed that the early introduction of complementary foods led to problems of infections and malnutrition (Vaahtera M, 2001). There are traditional practices of prelacteal feeding in our study area. The reported prelacteal feedings like sugar water, cow milk and honey were mostly given because of insufficient breast milk or illnesses of the mother. Similar reasons about failure to provide EBF were reported from a tertiary hospital in Pakistan (Memon S, 2010). It is interesting to note that some mothers could not mention any reason for early introduction of food indicating that it is a common norm and practice in the community. So, even though proper knowledge of mothers about infant feeding, the practice might be affected by the cultural food taboos and beliefs. So, importance of involvement of family members during infant feeding counseling should be emphasized within the existing healthcare system such as during antenatal visit and at vaccination clinics. During illness, the need for fluid often increases; so, a child should be offered and encouraged to take more fluid, and breastfeeding on demand should continue (World Health

Organization; 2002). A child should also be encouraged to eat some complementary foods in the illness period to maintain nutrient intake and enhance recovery (Brown K, 2001). However, in the present study, only 38% mothers continued breast feeding as before during illness. Hence, a very realistic approach to overcome the disparity between mother's knowledge and practice regarding infant feeding should be implemented as well as the contributing factors should be found out. An effective Information Education and Communication (PHIEC) activity especially directed toward mothers as well as their family members is highly recommended.



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Appendix

Summary of food frequency questionnaire on types of meals in 7 days recall:

Age of the infant (completed month)	Types of meal								
	Breast milk	Infant formula	Water	Cow's milk	Fruits	Vegetables	Rice/ Cereals	Meat/ Chicken	Eggs
6	√	√	√				√		√
7	√	√	√			√	√		√
8	√		√		√	√	√	√	√
9	√		√	√	√	√	√	√	√
10	√		√	√	√	√	√	√	√
11	√		√	√	√	√	√	√	√
12	√		√	√	√	√	√	√	√