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Knowledge, Attitude and Practice of Infant Feeding among Mothers

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ABSTRACT

Title: The study is on “Knowledge, Attitude, and Practice of Infant Feeding among Mother”. **Introduction:** As an infant grows and becomes active, breast milk alone is not sufficient to meet the infant’s nutritional needs. Complementary foods are then given to meet the nutritional needs of the infants. For most infants complementary foods start generally from six months of age. Appropriate complementary foods and breast milk together meet infants’ nutritional requirements, which is very significant for their physical and mental growth. **General Objective:** This study was carried out to find out the level of Knowledge, Attitude, and Practice related of infant feeding among mothers in selected hospital in Dhaka, Bangladesh. **Methods and Materials:** The findings have resulted from a cross sectional study done to assess the level of knowledge, attitude, and practice of infant feeding among 180 respondents at Shishu Hospital, Pediatrics OPD in Dhaka, Bangladesh. The respondents were selected purposively. A standard structured questionnaire was used to collect data from the respondents. The survey for the study was conducted during a period from May 2010 to June 2011. While the sampling was purposive, a pre-tested questionnaire was used as a basic instrument. The mothers of a selected hospital having infants of 6 to 12 months of age were taken as a study population. The study was done with a purposive sampling. The data were processed by SPSS (version -16). Charts and graphs were prepared with “Excel”. Coding, interpretation, writing, and editing followed the data processing and preparation of charts and graphs **Results:** The major findings of the study based on the field survey reveal: (i) The respondents were aged 18 to 40 years all female with 96.1 percent mothers and 3.9 percent caregivers. These demographic characteristics suggest that it was mainly the mothers who took care of complementary feeding of their children. The ages of the children sampled were six to 12 months. (ii) Respondents thinking ideal time for breastfeeding just after birth of baby was 54.4 percent and 30.0 percent thought it should have started within 30 minutes after birth. The respondents thinking that the duration of breastfeeding would be up to two years were 46.7 percent. (iii) Most of the respondents 98.9 percent gave complementary foods to their children. The most popular kinds of complementary foods since their start included infant formula 37.8 percent, suzi with milk 46.7 percent, and Khichuri 64.4 percent. (iv) The majority of the respondents (99.4 percent) had knowledge about food consistency. The majority of the respondents and caregivers (97.8 percent) thought that there was a need of food variety during complementary feeding. A high percentage of respondents (58.9 percent) thought that complementary foods should have been provided after breastfeeding while 31.1 percent suggested no breastfeeding after starting complementary feeding. (v) The highest percentage of respondents giving four hourly complementary was 28.3 per cent. (vi) Most of the respondents 99.3 per cent felt interested in preparing complementary foods. (vii) While respondents using boiled water were 57.8 percent, the majority (99.4 percent) washed their hands and utensils properly before feeding and 97.2 percent washed hands after coming from toilet. **Implication:** Services on complementary feeding provided to poor families and their malnourished children is very important for which the government and development NGOs need to play a clear role defined and guided by national nutrition programs. **Conclusion:** Malnourishment is indeed a health problem in many developing countries in the world including Bangladesh. Deficiencies of micronutrients cause severe malnutrition. So it is very important that a baby is put to the breast soon after birth followed by complementary feeding at least from the age of six months up to 24 months.

Keywords: Knowledge, Attitude, Practice of Infant Feeding, Mothers

INTRODUCTION

The estimated population of Bangladesh in 2007 was 150,440,000; making it one of the ten most densely populated countries in the world, with 890 persons/sq km (2,304 persons per square mile). The population density of Bangladesh is much higher than other countries in Asia.¹ Complementary feeding means giving other foods in addition to breast milk. These other foods are complementary to

what children get from breast milk of their mothers. During the period of complementary feeding, a baby gradually becomes accustomed to eating family foods. There are two kinds of complementary foods:

- Specially prepared foods, and
- Usual family foods that are modified so that children can eat them and get enough nutrients.

As a baby grows and becomes active, an age is reached when breast milk alone is not sufficient to meet the child's nutritional needs. Complementary foods are then needed to fill the gap between the total nutritional needs of the child and the amounts provided by breast milk. Complementary foods should be started when the baby can no longer get enough energy and nutrients from breast milk alone. For most babies this is four to six months of age. This is also the age when nerves and muscles in the mouth develop sufficiently to let the baby munch, bite and chew. Before four months, babies push food out of their mouths because they cannot fully control the movement of their tongues. At four to six months of age it becomes easier to feed thick porridges, purees and mashed foods because children:

- Can control their tongues better,
- Start to make up-and-down "munching" movements,
- Start to get teeth,
- Like to put things in their mouths, and
- Are interested in new tastes.²

Malnutrition is a major public health problem in Bangladesh, which is related to child death in majority of cases. Vision of National Nutrition Program is to provide community nutrition services with the support of partner non-government organizations (NGOs) for combating malnutrition. Children become malnourished due to poor or low or insufficient breastfeeding, inappropriate complementary feeding and due to inadequate caring practice or services.³

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.⁴ The link between malnutrition and infant-feeding practices has been well-established. Incidence of malnutrition rise sharply during 6-8 months of age in most country, which coincides with period of complementary feeding, and deficits acquired at this age are difficult to compensate later in childhood. In India, only 55% of infants receive semi-solid or solid foods, in addition to breast milk, during 6-8 months of age, sowing faulty complementary feeding practices to be a significant problem of public health.⁵

Impact of breastfeeding on the ultimate growth and development of the infant is well known. Exclusive breastfeeding has a great influence on the morbidity of the under-five children in the Bangladesh.⁶ Complementary foods are often of lesser nutritional quality than breast milk. In addition, they are often given in insufficient amounts and, if given too early or too frequently, they displace breast milk. Gastric capacity limits the amount of food that a young child can consume during each meal. Repeated infections reduce appetite and increase the risk of inadequate intakes. Infants and young children need a caring adult or other responsible person who not only selects and offers appropriate foods but assists and encourages them to consume these foods in sufficient quantity. Global recommendations for appropriate feeding of infants and young children are:

- Breastfeeding should start early, within one hour after birth.
- Breastfeeding should be exclusive for six months.
- Appropriate complementary feeding should start from the age of six months with continued breastfeeding up to two years or beyond.

Appropriate complementary feeding is:

- Timely: meaning that foods are introduced when the need for energy and nutrients exceed what can be provided through exclusive and frequent breastfeeding;
- Adequate: meaning that foods provide sufficient energy, protein, and micronutrients to meet a growing child's nutritional needs;

- Safe: meaning that foods are hygienically stored and prepared, and fed with clean hands using clean utensils and not bottle and teats;
- Properly fed: meaning that foods are given consistent with a child's signals of appetite and satiety, and that meal frequency and feeding method actively encouraging the child to consume sufficient food using fingers, spoon or self-feeding are suitable for age. Precise definitions of appropriate practices have been developed for breastfeeding.⁷

RESEARCH QUESTION

What is the level of knowledge, attitude, and practice of infant feeding among mothers in selected hospital in Dhaka, Bangladesh?

OBJECTIVES OF THE STUDY

General Objective

To find out the level of knowledge, attitude, and practice of infant feeding among mothers in selected hospital in Dhaka, Bangladesh

Specific Objectives

1. To find out the factors related to knowledge of infant feeding among the mothers of selected hospital in Dhaka, Bangladesh.
2. To assess the factors related to attitude towards infant feeding among the mothers of selected hospital in Dhaka, Bangladesh.
3. To find out the factors related to practice of infant feeding among the mothers of selected hospital in Dhaka, Bangladesh.
4. To find out the socio-demographic characteristic of the respondent of selected hospital in Dhaka, Bangladesh.
5. To find out the relationship between the socio-demographic characteristic and knowledge of infant feeding among the mothers of selected hospital in Dhaka, Bangladesh.

KEY VARIABLE

Socio Demographic Factors

- Age, Sex, Occupation, Education,
- Religion, Family size, Family income,
- Residence and marital status.

Knowledge related factors:

- Time of introduction (age of introduction)
- Types of food
- Frequency of feeding.
- Food consistency

Breastfeeding:

- Duration
- Age of introduction
- Currently breastfeeding

Attitude related factors:

- Willingness to give CF
- Responsive feeding
- Feeding during and after illness.

Practices related factors:

- Food handling
- Food preparation
- Hygiene-hand
- Food storage

Information, Education, and Communication (IEC) Related Factors:

- Source of information
- Mass media

- Campaign,
- Counseling

RESEARCH METHODOLOGY

Study Design: This is a cross-sectional descriptive and analytical type of study that includes review of existing resources and findings from the survey.

Study Period: The duration of the study was from June to November 2010. The entire period divided into different study and analysis activities.

Study Area: Shishu Hospital, Pediatrics OPD (Out Patient Department), Sher-E-Bangla Nagar, Agargaon, Dhaka, Bangladesh. Shishu Hospital was established in 1977. The total number of beds in this hospital is 500. The patients attending the OPD during the data collection was nearly 200. The working environment of this hospital was good.

Target Population: The mothers and caregivers of a selected hospital having infants aged 6 to 12 months.

Sample Size

Sample size was taken on the basis of following formula:-

$$\text{Sample size } (n) = z^2pq/d^2$$

Where,

n = the minimum sample size.

z= the standard normal deviate usually set at 1.96 which corresponds to the 95% CI.

p= the proportion of the target population estimated to have a particular characteristics. There is no reasonable estimate so 50% (0.5) is used.

q= 1-p

d= margin of error (precision) usually set at 5%.

The required sample size was:

$$\begin{aligned} (n) &= z^2pq/d^2 \\ &= (1.96)^2 \times 0.5 \times 0.5 / (0.05)^2 \\ &= 3.8416 \times 0.5 \times 0.5 / 0.0025 \\ &= 384.16 \end{aligned}$$

$$\begin{aligned} (n) &= Z^2pq/d^2 \\ \text{Confidence interval} \\ 1 - \alpha &= .95 \quad \text{from table} \\ \therefore \alpha &= 0.05 \quad Z_{\alpha} = Z_{.05} \\ &= 1.96 \end{aligned}$$

But, here the data collection time was short and the resources were limited. So, for this research purpose, 180 respondents had been selected as a feasible sample size.

Sampling Technique: The study was done with a purposive sampling. A total of 180 respondents were selected from Shishu Hospital.

Data Collection Tools: A 4-page questionnaire was developed and used which included both open-ended and close-ended questions for collection of both quantitative and qualitative data and information. 180 mothers and caregivers of a selected hospital having infants aged 6 to 12 months were interviewed face to face.

Data Collection Procedure: I collected primary data a structured questionnaire and thus interviews have been conducted. The survey has also followed a detailed process of pre-testing and modification of the developed questionnaire. The questionnaire contains several sections. The questionnaire has about four pages. During data collection it is also observed that some of the Hospital could not be asked.

Data Analysis and Processing: The pre-designed data sheet was scrutinized 100 percent to check the quality of the raw data. It is basically a process of examination to detect errors, and to correct these, wherever possible. The hundred percent cross-checking was done after editing, which gives a good quality of data. A code plan has developed for each question. The variable was defined for single observation with the value and the value description according to the data type. The coded sheet was re-checked for data quality. The results were presented in tables in mean, standard deviation (SD) and percentages. Chi square and a "p" value <0.05 was considered significant. Computers partially reduce the risk of human error and save time for a more thorough data processing. After editing and coding,

the coded data were directly entered into the computers by using SPSS/PC software. Data cleaning validation and analysis were performed using the SPSS/PC software. Data entry and analysis: SPSS (VERSION-16) and Graph and Chart. Excel was used to assess the strength of association between predictor and outcome variable.

Eligibility Criteria: Mothers with infants aged 6 months to 12 months of these infants. Excluded are other members of the respondents' families.

Inclusion Criteria

- All mothers who have infants aged 6 to 12 months.
- Mother who attend to the OPD for seeking treatment and advice and on date of data collection.
- Willing to give interview.

Exclusion criteria

- Mothers who have infants below 6 months and above 12 months.
- Only mothers visiting Shishu Hospital pediatrics OPD.
- Sick mothers and who have very sick baby.
- Unwilling mothers.

RESULTS AND FINDINGS

This chapter discusses the results and findings of the study. The survey was conducted upon 180 mothers and caregivers who willingly participated and completed a questionnaire and gave valuable information that has been instrumental in understanding ground realities necessary for the study. The questionnaire and findings are based on the objectives and variables that are reflected in the following tables, pie, bar-diagram, and statistical inferences. All respondents gave response to all questions and therefore there is no missing data.

A. Socio-economic Factor

Table 1: Distribution of the mothers and caregivers by their age:

Respondents' age	Frequency	Percentage
18-20 Years	45	25.0
21-25 Years	67	37.2
26-30 Years	45	25.0
31-40 Years	23	12.8
Total	180	100.0

Mean age 24.81 (standard deviation \pm 4.95)

Table 1 reveals that 25 percent of the mothers and caregivers were aged 18-20 years, 37.2 percent were aged 21 to 25 years, 25 percent were aged 26 to 30 years, and 12.8 percent were 31-40 years.

Table 2: Distribution of the mothers and caregivers' relationship with the child

Relationship	Frequency	Percentage
Mothers	173	96.1
Caregivers	7	3.9
Total	180	100.0

Table 2 shows that 96.1 percent were mothers and 3.9 percent were caregivers.

Table 3: Distribution of the mothers and caregivers according to sex of the child

Sex	Frequency	Percentage
Male	98	54.4
Female	82	45.6
Total	180	100.0

Table 3 shows that 54.4 percent of the male children were receiving complementary foods while 45.6 percent of the female children were getting complementary foods.

Figure 1: Distribution of the respondents according to the number of Children

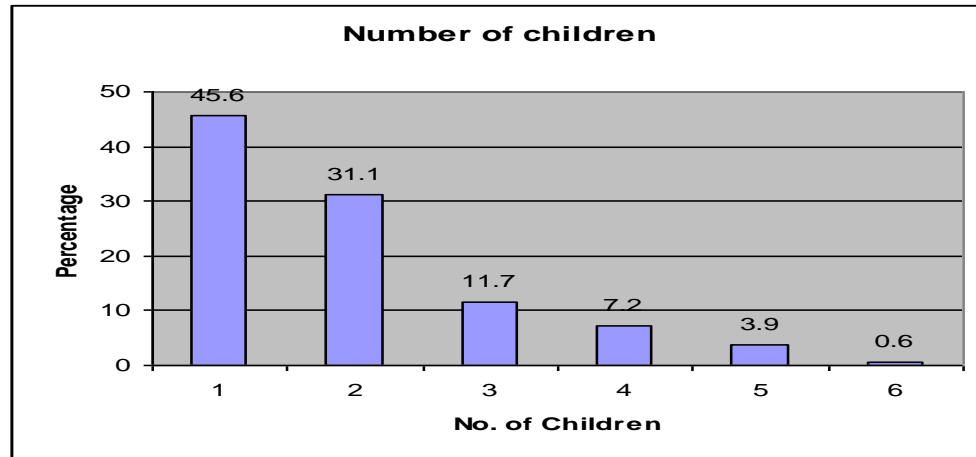


Figure 1 reveal that 45.6 percent of mothers among the respondents had just one child, 31.1 percent had two children, 11.7 percent mothers had three children, 7.2 percent had four children, 3.9 percent had five children, and 0.6 percent had six children.

Table 4: Distribution of the child by their age (in months)

Age (months)	Frequency of Children	Percentage
6	8	4.4
7	13	7.2
8	24	13.3
9	23	12.8
10	18	10.0
11	29	16.1
12	65	36.1
Total	180	100.0

Table 4 shows that 4.4 percent of the infants were aged six months; 7.2 percent were seven months, 13.3 percent were eight months, 12.8 percent were nine months, 10 percent were ten months, 16.1 percent were 11 months, and 36.1 percent were 12 months.

Table 5: Distribution of the respondents according to the Occupation

Occupations	Frequency	Percentage
Housewives	159	88.3
Service holders	15	8.3
Maid servants	6	3.3
Total	180	100.0

Table 5 shows that 88.3 percent of the mothers were housewives while 8.3 percent of the mothers were service holders and 3.3 percent were maid-servants.

Table 6: Distribution of the respondents by their educational qualification

Qualifications	Frequency	Percentage
Illiterate	31	17.2
Primary	17	9.4
Class five to ten	72	40.0
SSC	27	15.0
HSC	15	8.3
Graduate	6	3.3
Masters	12	6.7
Total	180	100.0

Table 6 reveals that 17.2 percent were illiterate; 40 percent of respondents had education from class five to ten, 15.0 percent had S.S.C level education, 9.4 percent had primary level education, 8.3 percent were H.S.C. passed, 3.3 percent were graduates and 6.7 percent had master's degree.

Figure 2: Category of the respondents according to the religion status

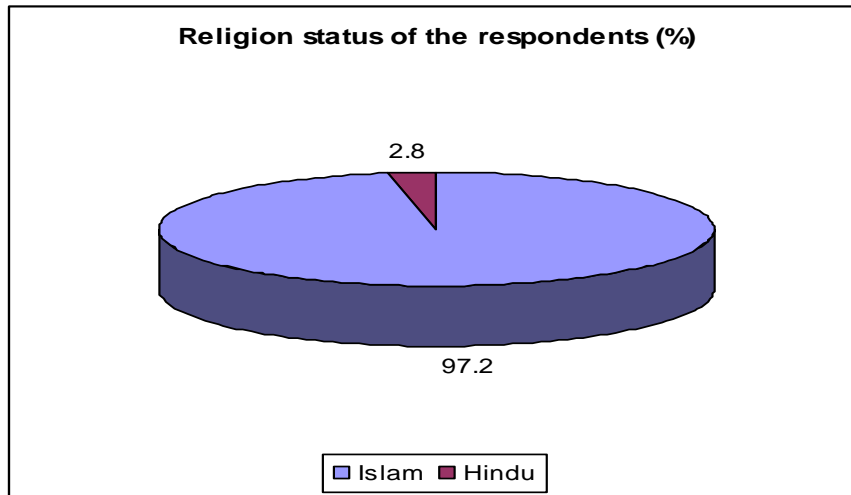


Figure 2 show that the majority 97.2 percent of the respondents were Muslims while only 2.8 percent were Hindus.

Table 7: Distribution of the respondents according to the number of family members

Family members	Frequency	Percentage
2	56	31.2
3	49	27.2
4	36	20.0
5	15	8.3
6	15	8.3
7	6	3.3
8	3	1.7
Total	180	100.0

Table 7 reveals that the respondents having two family members were 31.2 percent; 27.2 percent had three members, 20.0 percent had four and 8.3 had five and six family members respectively, 3.3 percent had seven, and 1.7 percent had eight family members.

Table 8: Distribution of the respondents according to their types of family

Types	Frequency	Percentage
Nuclear	128	71.1
Joint	52	28.9
Total	180	100.0

Table 8 reveals that 71.1 percent of the respondents came from nuclear families and 28.9 percent came from joint families.

Table 9: Distribution of the respondents by their types of residence

Types	Frequency	Percentage
Urban	90	50.0
Rural	63	35.0
Slum	27	15.0
Total	180	100.0

Table 9 reveals that 50 percent of the respondents lived in the urban/municipality; 35.0 percent lived in rural areas, and 15.0 percent lived in slum areas.

Table 10: Distribution of the respondents by their family income

Income	Frequency	Percentage
Less than 2100 BDT	12	6.7
2100 to less than 4200	57	31.7
4200 to less than 6300	35	19.4
above 6300	76	42.2
Total	180	100.0

Table 10 reveals that family income of 6.7 percent of the respondents was less than 2100 BDT, which was 2100 BDT to 4200 BDT for 31.7 percent, 4200 BDT to less than 6300 BDT for 19.4 percent, and 6300 BDT and above for 42.2 percent.

Table 11: Distribution of the respondent's to their marital status

Marital status	frequency	Percentage
Married	177	98.3
Divorced	3	1.7
Total	180	100.0

Table 11 shows that 98.3 percent of the respondents were married while 1.7 percent was divorced.

B. Factors Related to Knowledge on Infant Feeding

Table 12: Ideal time for starting breastfeeding

Ideal time	Frequency	Percentage
Just after birth of baby	98	54.4
Within 30 minutes after birth	54	30.0
Any time	5	2.8
After one day	9	5.0
After two days	11	6.1
Do not know	3	1.7
Total	180	100.0

Table 12 shows that 54.4 percent thought that ideal time for starting breastfeeding was just after birth of baby, 30.0 percent thought it was within 30 minutes after birth, 2.8 percent thought it was any time after birth, 5.0 percent thought it was one day after birth, 6.1 percent thought it was two days after birth, and 1.7 percent did not know.

Table 13: Duration of breastfeeding

Duration	Frequency	Percentage
Up to 6 months	12	6.7
Up to 1 year	3	1.7
Up to 2 years	84	46.7
As demanded	63	35.0
Do not know	18	10.0
Total	180	100.0

Table 13 reveals that 6.7 percent of the respondents thought that the duration of breastfeeding should have been up to six months, while 1.7 percent should have been one year and 46.7 percent thought it should have been two years. The respondents thought it should have been according to demand of the infants constituted 35.0 percent while 10.0 percent did not know.

Table 14: Current breastfeeding status

Status	Frequency	Percentage
Yes	175	97.2
No	5	2.8
Total	180	100.0

Table 14 reveals that 97.2 percent of the respondents currently breastfed their infants and 2.8 percent did not.

Table 15: Current status of giving infant feeding

Status	Frequency	Percentage
Yes	178	98.9
No	2	1.1
Total	180	100.0

Table 15 shows that most of the respondents, 98.9 percent, currently gave infant feeding to their children and 1.1 percent didn't.

Figure 3: Distribution of the respondents according to the starting age of complementary feeding

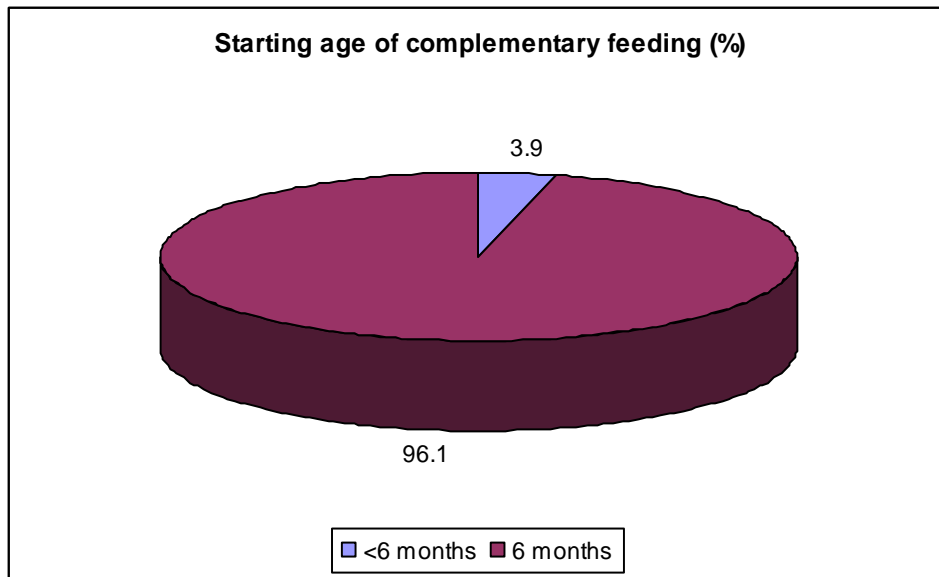


Figure 3 reveal that the majority 96.1 percent of the respondents started complementary feeding at the age of six months and only 3.9 percent started it before six months of age.

Table 16: Complementary foods given since starting*

Foods given	Frequency	Percentage
Infant formula milk (diluted)	68	37.8
Cow's milk/goat milk (diluted)	26	14.4
Cow's milk/goat milk (not diluted)	2	1.1
Rice/rice powder/suzi (without milk)	29	16.1
Suzi (with milk)	84	46.7
Infant formula cereals (Cereals)	31	17.2
Vegetables	22	12.2
Egg	45	25.0
Fish	10	5.6
Khichuri	116	64.4
Fruits	48	26.7
Noodles	2	1.1
Pulse/Dal	8	4.4
Others	1	0.6
Total	492	273.3

Note: Total will exceed 100% due to multiple responses (Total respondents 180)

*Respondents giving multiple responses

Table 16 reveals that since the start of giving complementary foods 37.8 percent gave infant formula milk (diluted), 14.4 percent gave cow's milk/goat milk (diluted), 1.1 percent gave cow's milk/goats milk (not diluted), 16.1 percent gave rice/rice powder/suzi (without milk), 46.7 percent gave suzi with

milk, 17.2 percent gave infant formula cereals (cereals), 12.2 percent gave vegetables, 25.0 percent gave egg, 5.6 percent gave fish, 64.4 percent gave khichuri, 26.7 percent gave fruits, 1.1 percent gave noodles, 4.4 percent gave pulse/dhal, and 0.6 percent gave other foods. It should be noted that a large percentage of the respondents were found to be giving more than one complementary foods to their infants; so the total percentage far exceed 100 percent.

Table 17: Certain foods not given

Foods not given	Frequency	Percentage
Prejudice	17	9.4
Financial constraint	11	6.1
Others (Baby does not accept)	107	59.4
Not applicable	45	25.0
Total	180	100.0

Table 17 reveals that the respondents who didn't give certain foods for prejudice were 9.4 percent while 6.1 percent didn't give certain foods for financial constraint, and 59.4 percent for other reasons (one reasons being reluctance on the side of the baby). In case of 25.0 percent of the respondents, this was not applicable.

Table 18: Knowledge about food consistency

Knowledge	Frequency	Percentage
Yes	179	99.4
No	1	.6
Total	180	100.0

Table 18 reveals that the majority of the respondents and caregivers 99.4 percent had knowledge about food consistency and 0.6 percent didn't.

Table 19: Consistency of foods preferred

Consistency preferred	Frequency	Percentage
Liquid	64	35.6
Semi solid	35	19.4
Both liquid and semi solid	81	45.0
Total	180	100.0

Table 19 reveals that a large number of respondents, 35.6 percent, preferred liquid foods, 19.4 percent semi-solid, and 45.0 percent liquid and semi-solid.

Table 20: Need of food variety during infant feeding

Need	Frequency	Percentage
Yes	176	97.8
No	4	2.2
Total	180	100.0

Table 20 reveals that the majority of the respondents and caregivers, 97.8 percent, thought that there was a need of food variety during infant feeding and 2.2 percent didn't.

Table 21: Perception about starting time for providing infant feeding

Starting time	Frequency	Percentage
After breastfeeding	106	58.9
No breastfeeding after starting C/F	56	31.1
Before breastfeeding	16	8.9
Do not know	2	1.1
Total	180	100.0

Table 21 reveals that 58.9 percent thought that infant foods should have been provided after breastfeeding while 31.1 percent suggested no breastfeeding after starting complementary feeding, 8.9 percent suggested it before breastfeeding, and 1.1 percent was ignorant about it.

Table 22: Perception about complementary feeding during illness

Perception	Frequency	Percentage
Yes	54	30.0
No	126	70.0
Total	180	100.0

Table 22 reveals that 30.0 percent of respondents thought that complementary feeding was essential during illness while 70.0 percent suggested it was not essential during illness.

Figure 4: Distribution of the respondents by giving complementary food in 24 hours

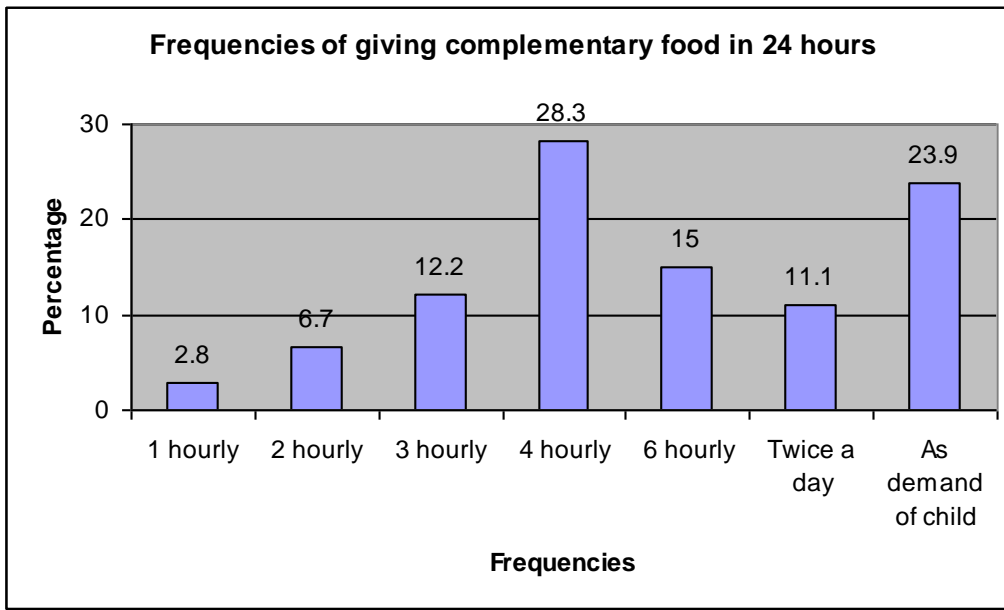


Figure 4 shows that 28.3 percent of the respondents and caregivers were feeding complementary foods four hourly, 23.9 percent were feeding as their infants demanded, 15.0 percent were feeding six hourly, 12.2 percent three hourly, 11.1 percent twice a day, 6.7 percent two hourly, and 2.8 percent one hourly.

Figure 5: Distribution of the respondents according to the perception about complementary feeding after illness

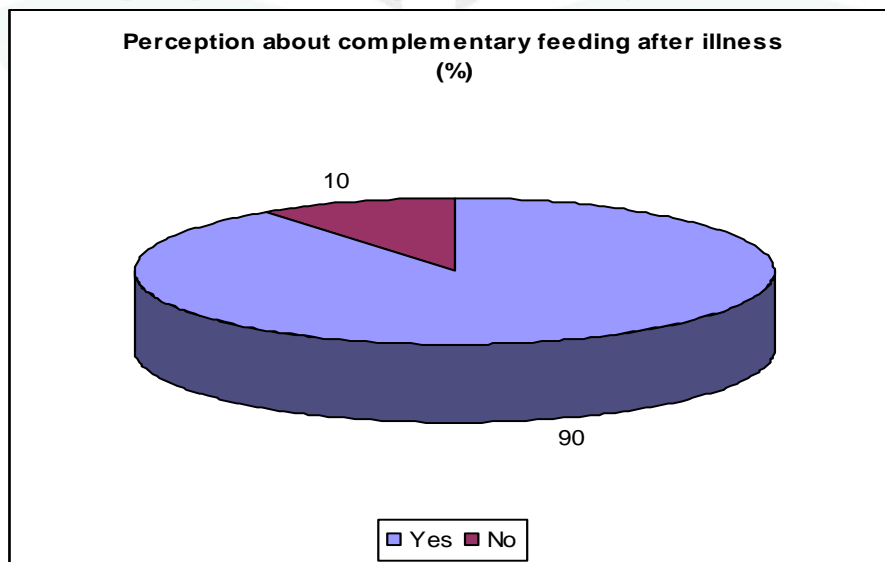


Figure 5 shows that 90.0 percent of the respondents thought that complementary feeding after illness was essential while 10.0 percent thought it was not essential to provide complementary feeding after illness.

C. Factors Related to Attitude about Infant Feeding**Table 23: Interest in preparing complementary feeding**

Interest	Frequency	Percentage
Yes	168	93.3
No	12	6.7
Total	180	100.0

Table 23 shows that 99.3 percent of the respondents were interested in preparing complementary food and 6.7 percent weren't.

Table 24: Reason for feeling interested in infant feeding*

Reasons	Frequency	Percentage
Proper growth and development	122	67.8
Love and affection	31	17.2
As being my child	41	22.8
As the child likes	19	10.6
Do not know	1	0.6
Total	214	118.9

Note: Total will exceed 100% due to multiple responses (total respondents: 180)

*Respondents giving multiple responses

Table 24 shows that 67.8 percent of the respondents felt interested in infant feeding for proper growth and development of their children; 17.2 percent felt interested out of love and affection for their infants; 22.8 percent felt interested because they were mothers; and 10.6 percent were interested because their children liked such feeding; 0.6 percent didn't know.

Table 25: Measures to be taken during infant feeding*

Measures	Frequency	Percentage
Hurry	18	10.0
Slow	158	87.8
Patience	25	13.9
Total	201	111.7

Note: Total will be exceeding 100 percentages due to multiple responses (total respondents: 180).

*Respondents giving multiple responses

Table 25 reveals that 10 percent of the mothers provided infant feeding in hurry; while 87.8 percent fed their children slowly; and 13.9 percent fed patiently.

Table 26: Feeding complementary foods after illness

Status	Frequency	Percentage
Yes	176	97.8
No	4	2.2
Total	180	100.0

Table 26 reveals that 97.8 percent gave complementary foods after illness and 2.2 percent didn't.

D: Factors Related to Infant Feeding Practice**Table 27: Types of water used for preparation of food**

Types of water	Frequency	Percentage
Tube-well	40	22.2
River (boiled)	2	1.1
River (un-boiled)	34	18.9
Tap water (boiled)	104	57.8
Total	180	100.0

Table 27 shows that 22.2 percent of the respondents used tube-well water for preparation of infant foods, 1.1 percent used boiled river water, 18.9 percent used un-boiled river water, and 57.8 percent used tap water (boiled).

Table 28: Washing hands and utensils before feeding

Washing hands and utensils	Frequency	Percentage
Yes	179	99.4
No	1	.6
Total	180	100.0

Table 28 reveals that 99.4 percent washed their hands and utensils properly before feeding, and 0.6 percent didn't.

Table 29: Types of latrine used

Types	Frequency	Percentage
Sanitary	164	91.1
Kacha	16	8.9
Total	180	100.0

Table 29 reveals that the majority of the respondents, 91.1 percent, used sanitary latrine and 8.9 percent used *kacha* latrine.

Table 30: Washing hands after coming from toilet

Washing hands after toilet	Frequency	Percentage
Yes	175	97.2
No	5	2.8
Total	180	100.0

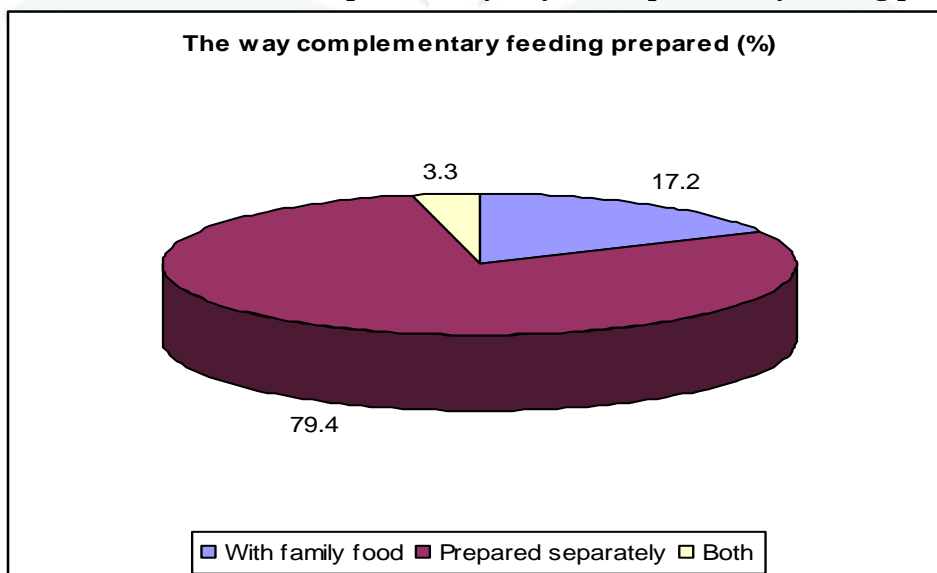
Table 30 reveals that 97.2 percent of the respondents and caregivers washed hands after coming from toilet and 2.8 percent didn't.

Table 31: Covering complementary foods after preparation

Covering foods	Frequency	Percentage
Yes	179	99.4
No	1	0.6
Total	180	100.0

Table 31 reveals that 99.4 percent of the respondents covered complementary foods after preparation; only 0.6 percent didn't cover it.

Figure 6: Distribution of the respondents by way of complementary feeding prepared



Above figure 6 shows that 17.2 percent of the respondents prepared complementary foods with family food, 79.4 percent prepared those separately, and 3.3 percent prepared those in both ways.

E: Factor Related to IEC (Information, Education, and Communication)**Table 32: Advice received from others regarding C/F**

Advice received	Frequency	Percentage
Yes	175	97.2
No	5	2.8
Total	180	100.0

Table 32 shows that 97.2 percent of the respondents received advice from others regarding complementary feeding and 2.8 percent didn't.

Table 33: Attending meeting on Infant Feeding

Attending meeting	Frequency	Percentage
Yes	30	16.7
No	150	83.3
Total	180	100.0

Table 33 reveals that 83.3 percent of the respondents attended meeting on infant feeding and 16.7 percent didn't.

Table 34: Preference about kinds of awareness program on infant feeding*

Preference about awareness program	Frequency	Percentage
Television program	160	88.9
Radio program	24	13.3
Street drama	4	2.2
Others	14	7.8
Total	202	112.2

Note. Total will be exceed 100 percentage due to multiple response (Total respondent 180).

* Respondents giving multiple responses

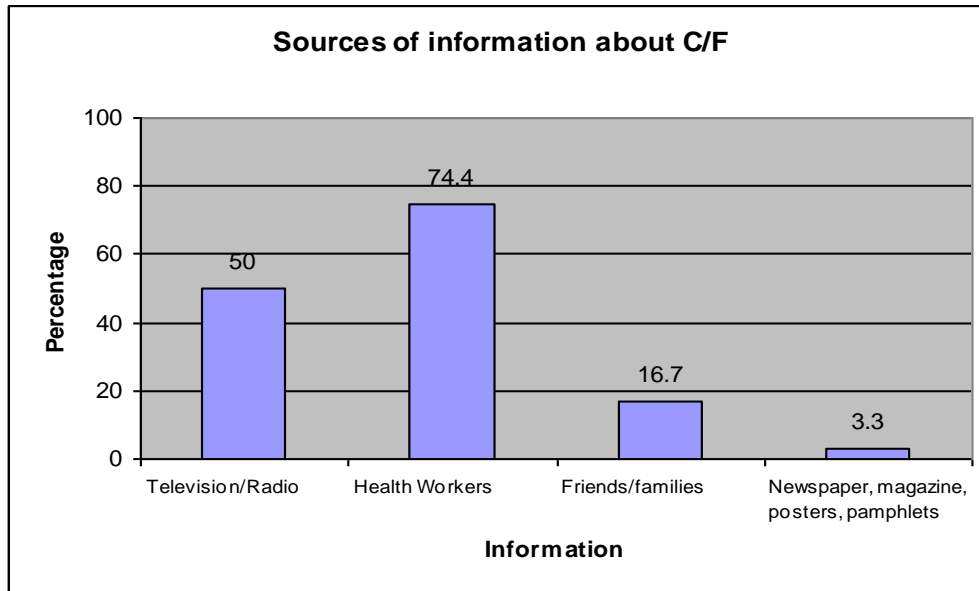
Table 34 reveals that 88.9 percent of the respondents preferred awareness programs on television, 13.3 percent from radio, 2.2 percent from street drama, and 7.8 percent from others.

Table 35: Place of counseling service on C/F

Place of counseling	Frequency	Percentage
Health Centre	157	87.2
School/College	5	2.8
Health Centre and School/College	18	10.0
Total	180	100.0

Table 35 reveals that 87.2 percent of the respondents said that health center should have provided counseling service on complementary feeding, 2.8 percent said counseling service should have been provided at school/college, and 10 percent said health center and school/ college should have been place for counseling to the respondents on complementary feeding.

Figure 7: Distribution of respondents by sources of information about complementary feeding*



As figure 7 shows 50.0 percent of the respondents and caregivers received information about complementary feeding from television/radio; 74.4 percent from health workers, 16.7 percent from friend/families, and 3.3 percent from newspapers, magazines, posters, and pamphlets.

Note: Total will be exceed 100 percentages due to multiple response (Total respondent 180)

* Respondents giving multiple responses
Mothers' level of knowledge on complementary feeding.

Table 36: Association of age with level of knowledge of mothers on infant feeding.

Age	Knowledge on infant feeding				Total		χ^2	P
	Good knowledge		Poor knowledge		Freq	(%)		
	Freq	(%)	Freq	(%)	Freq	(%)		
18-25	21	(18.8%)	91	(81.2%)	112	(100.0%)	2.068	0.150
26-40	19	(27.9%)	49	(72.1%)	68	(100.0%)		
Total	40	(22.2%)	140	(77.8%)	180	(100.0%)		

* Chi-square test with two tails significant

Table 36 reveals that among the mothers 18.8 percent had good knowledge in the age group 18-25 years and 27.9 percent had good knowledge in the age group 26-40 years. So mothers in the higher age group had better knowledge on the infant feeding.

Table 37: Association of sex of the child with level of knowledge of mothers on infant feeding

Sex	Knowledge on infant feeding				Total		χ^2	P
	Good knowledge		Poor knowledge		Freq	(%)		
	Freq.	(%)	Freq.	(%)	Freq	(%)		
Male	21	(21.4%)	77	(78.6%)	98	(100.0%)	0.078	0.779
Female	19	(23.2%)	63	(76.8%)	82	(100.0%)		
Total	40	(22.2%)	140	(77.8%)	180	(100.0%)		

* Chi-square test with two tails significant

Table 37 reveals that 21.4 percent mothers with male children had good knowledge and 23.2 percent with female children also had good knowledge. These findings indicated that mothers with female children had better knowledge on the infant feeding.

Table 38: Association of occupation with level of knowledge of mothers on infant feeding

Occupation	Knowledge on infant feeding				Total		χ^2	P
	Good Knowledge		Poor knowledge		Freq	%		
	Freq	(%)	Freq	(%)				
H/wife	34	(21.4%)	125	78.6%	159	(100.0%)		
Service	6	(28.6%)	15	76.8%	21	(100.0%)	0.217	0.642
Total	40	(22.2)	140	77.8%	100	(100.0%)		

* Continuity correction with two tail significant

Table 38 reveals that 21.4 percent mothers who are housewives had good knowledge and 28.6 percent mothers in service holder had good knowledge. So mothers in the service holder had better knowledge on the infant feeding

Table 39: Association of educational qualification with level of knowledge of mothers on infant feeding

Education	Knowledge on infant feeding				Total		χ^2	P
	Good knowledge		Poor knowledge		Freq	%		
	Freq	(%)	Freq	(%)				
Illiterate	6	(19.4%)	25	(80.6%)	31	(100.0%)		
literate	34	(22.8%)	115	(77.2%)	149	(100.0%)	0.178	0.673
Total	40	(22.2%)	140	(77.8%)	180	(100.0%)		

* Chi-square test with two tails significant

Table 39 reveals that 19.4 percent illiterate mothers had good knowledge and 22.8 percent literate mothers had good knowledge. So the literate mothers had better knowledge on the infant feeding.

Table 40: Association of religion with level of knowledge of mothers on infant feeding

Religion	Knowledge on infant feeding				Total		χ^2	P
	Good Knowledge		Poor Knowledge		freq	%		
	Freq	(%)	Freq	(%)				
Islam	39	(22.3%)	136	(77.7%)	175	(100.0%)		
Hindu	1	(20.0%)	4	(80.0%)	5	(100.0%)	--	0.692
Total	40	(22.2%)	140	(77.8%)	180	(100.0%)		

* Fisher's exact test with two tails significant

Table 40 reveals that 22.3 percent Muslim mothers had good knowledge and 22.8 percent Hindu mothers had good knowledge. So Muslim mothers had better knowledge on the infant feeding

Table 41: Association of family type with level of knowledge of mothers on infant feeding

Family	Knowledge on infant feeding				Total		χ^2	P
	Good knowledge		Poor knowledge		Freq	%		
	Freq	(%)	Freq	(%)				
Nuclear	30	(23.4%)	98	(76.6%)	128	(100.0%)		
Joint	10	(19.2%)	42	(80.8%)	52	(100.0%)	0.000	0.000
Total	40	(22.2%)	140	(77.8%)	180	(100.0%)		

- Chi-square test with two tail significant

Table 41 reveals that 23.4 percent mothers from nuclear families had good knowledge and 19.2 percent mothers from joint families had good knowledge. So mothers from nuclear families had better knowledge on the infant feeding.

Table 42: Association of residence type with level of knowledge of mothers on infant feeding

Residence	Knowledge on infant feeding				Total		χ^2	P
	Good knowledge		Poor knowledge		Freq	%		
	Freq	(%)	Freq	(%)				
Urban	26	(22.2%)	91	(77.8%)	117	(100.0%)		
Rural	14	(22.2%)	49	(77.8%)	63	(100.0%)	0.000	0.000
Total	40	(22.2%)	140	(77.8%)	180	(100.0%)		

* Chi-square test with two tails significant

Table 42 reveals that 22.2 percent mothers who are from urban residence had good knowledge and 22.2 percent mothers who are from rural residence had good knowledge. So mothers from urban residence had better knowledge on the infant feeding.

Table 43: Association of monthly family income with level of knowledge of mothers on infant feeding

Income	Knowledge on infant feeding				Total		χ^2	P
	Good Knowledge		Poor Knowledge		Freq	%		
	Freq	(%)	Freq	(%)				
2100	11	(15.9%)	58	(84.1%)	69	(100.0%)		
6300	29	(26.1%)	82	(73.9%)	111	(100.0%)	2.553	0.110
Total	40	(22.2%)	140	(77.8%)	180	(100.0%)		

- Chi-square test with two tails significant

Table 43 reveals that 15.9 percent mothers in the families with monthly income of 2100-4200 taka had good knowledge and 26.1 percent mothers in the families with monthly income of 4300-6300 taka had good knowledge. So mothers from families with monthly income of 4300-6300 taka had better knowledge on the infant feeding.

Table 44: Association of marital status with level of knowledge of mothers on infant feeding

Marital	Knowledge on infant feeding				Total		χ^2	P
	Good knowledge		Poor knowledge		Freq	%		
	Freq	(%)	Freq	(%)				
Married	40	(22.6%)	137	(77.4%)	177	(100.0%)		
Divorced	0	(0.00%)	3	(100.0%)	3	(100.0%)	--	0.468
Total	40	(22.6%)	140	(77.8%)	180	(100.0%)		

- Fisher’s exact test with two tails significant

Table 44 reveals that 22.6 percent mothers who are married had good knowledge and no result of divorced mothers as regards knowledge. So married mothers had better knowledge on the infant feeding.

Mothers’ level of attitude on infant feeding

Table 45: Association of age with level of attitude of mothers on infant feeding

Age	Attitude on infant feeding				Total		χ^2	P
	Good attitude		Poor attitude		Freq	%		
	Freq	(%)	Freq	(%)				
18-25	70	(62.5%)	42	(37.5%)	112	(100.0%)		
26-40	46	(67.6%)	22	(32.4%)	68	(100.0%)	0.489	0.484
Total	116	(64.4%)	64	(35.6%)	180	(100.0%)		

- Chi-square test with two tail significant

Table 45 reveals that among the mothers 62.5 percent had good attitude in the age group of 18-25 years and 67.6 percent had good attitude in the age group of 26-40 years. So mothers in the higher age had better attitude on the infant feeding.

Table 46: Association of sex of the child with level of attitude of mothers on infant feeding

Sex	Attitude on infant feeding				Total		χ^2	P
	Good attitude		Poor attitude		Freq	%		
	Freq	(%)	Freq	(%)				
Male	61	(62.2%)	37	(37.8%)	98	(100.0%)	0.454	0.500
Female	55	(67.1%)	27	(32.9%)	82	(100.0%)		
Total	116	(64.4%)	64	(35.6%)	180	(100.0%)		

- Chi-square test with two tail significant

Table 46 reveals that 62.2 percent mothers with male children had good attitude and 67.1 percent with female children also had good attitude. These findings indicated that mothers with female children had better attitude on the infant feeding.

Table 47: Association of occupation with level of attitude of mothers on infant feeding

Occupation	Attitude on infant feeding				Total		χ^2	P
	Good attitude		Poor attitude		Freq	%		
	Freq	(%)	Freq	(%)				
Housewife	100	(62.9%)	59	(37.1%)	159	(100.0%)	1.431	0.232
Service	16	(76.2%)	5	(23.8%)	21	(100.0%)		
Total	116	(64.4%)	64	(35.6%)	180	(100.0%)		

- Chi-square test with two tail significant

Table 47 reveals that 62.9 percent mothers who are housewives had good attitude and 76.2 percent mothers in services holder had good attitude. So the mothers in the services holder had better attitude on the infant feeding.

Table 48: Association of educational qualification with level of attitude of on infant feeding.

Education	Attitude on infant feeding				Total		χ^2	P
	Good attitude		Poor attitude		Freq	%		
	Freq	(%)	Freq	(%)				
Illiterate	15	(48.4%)	16	(51.6%)	31	(100.0%)	4.214	0.040
Literate	101	(67.8%)	48	(32.2%)	149	(100.0%)		
Total	116	(64.4%)	64	(35.6%)	180	(100.0%)		

- Chi-square test with two tail significant

Table 48 reveals that 48.4 percent illiterate mothers had good attitude and 67.8 percent literate mothers had good attitude. So the literate mothers had good attitude on the infant feeding.

Table 49: Association of religion with level of attitude of mothers on infant feeding.

Religion	Attitude on infant feeding				Total		χ^2	P
	Good attitude		Poor attitude		Freq	%		
	Freq	(%)	Freq	(%)				
Islam	113	(64.6%)	62	(35.4%)	175	(100.0%)	--	0.584
Hindu	3	(60.0%)	2	(40.0%)	5	(100.0%)		
Total	116	(64.4%)	64	(35.6%)	180	(100.0%)		

- * Fisher's exact test with two tail significant

Table 49 reveals that 64.6 percent Muslim mothers had good attitude and 60.0 percent Hindu mothers had good attitude. So Muslim mothers had better attitude on the infant feeding

Table 50: Association of family type with level of attitude of mothers on infant feeding

Family	Attitude on infant feeding				Total		χ^2	P
	Good attitude		Poor attitude		Freq	%		
	Freq	(%)	Freq	(%)				
Nuclear	80	(62.5%)	48	(37.5%)	128	(100.0%)	0.731	0.393
Joint	36	(69.2%)	16	(30.8%)	52	(100.0%)		
Total	116	(64.4%)	64	(35.6%)	180	(100.0%)		

- Chi-square test with two tail significant

Table 50 reveals that 62.5 percent mothers from nuclear families had good attitude and 69.2 percent mothers from joint families had good attitude. So mothers from joint families had better attitude on the infant feeding.

Table 51: Association of residence type with level of attitude of mothers on infant feeding

Residence	Attitude on infant feeding				Total		χ^2	P
	Good attitude		Poor attitude		Freq	%		
	Freq	(%)	Freq	(%)				
Urban	83	(70.9%)	34	(29.1%)	117	(100.0%)	6.156	0.013
Rural	33	(52.4%)	30	(47.6%)	63	(100.0%)		
Total	116	(64.4%)	64	(35.6%)	180	(100.0%)		

- Chi-square test with two tail significant

Table 51 reveals that 70.9 percent mothers who are from urban residence had good attitude and 52.4 percent mothers who are from rural residence had good attitude. So mothers from urban residence had better attitude on infant feeding.

Table 52: Association of monthly family income with level of attitude of mothers on infant feeding

Income	Attitude on infant feeding				Total		χ^2	P
	Good attitude		Poor attitude		Freq	%		
	Freq	(%)	Freq	(%)				
2100	31	(44.9%)	38	(55.1%)	69	(100.0%)	18.60	0.000
6300	85	(76.6%)	26	(23.4%)	111	(100.0%)		
Total	116	(64.4%)	64	(35.6%)	180	(100.0%)		

- * Chi-square test with two tail significant

Table 52 reveals that 44.9 percent mothers in the families with monthly income of 2100-4200 Taka had good attitude and 76.6 percent mothers in the families with monthly income of 4300-6300 taka had good attitude. So mothers from families with monthly income of 4300-6300 had better attitude on the infant feeding.

Table 53: Association of marital status with level of attitude of mothers on infant feeding

Marital	Attitude on infant feeding				Total		χ^2	P
	Good attitude		Poor attitude		Freq	%		
	Freq	(%)	Freq	(%)				
Married	115	(65.0%)	62	(35.0%)	177	(100.0%)	---	0.288
Divorced	1	(33.3%)	2	(66.7%)	3	(100.0%)		
Total	116	(64.4%)	64	(35.6%)	180	(100.0%)		

- Fisher's exact test with two tail significant

Table 53 reveals that 65.0 percent mothers who are married had good attitude and 33.3 percent mothers who are divorced had good attitude. So married mothers had better attitude on the infant feeding

DISCUSSION

This cross-sectional purposive study was done to assess the level of awareness among mothers and caregiver of complementary feeding practices of infants. The findings are based on a survey of 180 mothers and caregivers who visited Shishu Hospital, Dhaka City at the time of my survey during June 2010 to April 2011. The study compares the awareness level of the mothers and caregivers using various techniques and tools, including the nominal scale. The study reveals that 25 percent the mothers and caregivers were aged 18-20 years, 37.2 percent were aged 21 to 25 years, 25 were aged 26 to 30 years, and 12.8 percent were aged 31-40 years (table-1). But according to a study in India 44 percent of the mothers were aged 22-24 years and 48 percent were primi mothers [Ref: 21].

The study reveals that most of the female respondents (96.1 percent) were mothers and 3.9 percent were caregivers [table-2]. If compared with at least another situation, a study in an urban area in Nepal, Katmandu found that out of 168 respondents all were mothers child pairs [Ref. 29]. The study shows that the percentage of the male children receiving complementary foods was 54.4 percent while the female children getting complementary foods were 45.6 percent (table-3). In Indonesia the situation in Indonesia was similar with 53 percent male children receiving complementary feeding [Ref-30]

This study reveals that 45.6 percent respondents had just one child, 31.1 percent had two children, 11.7 percent had three children, 7.2 percent had four children, 3.9 percent had five children, and 0.6 percent had six children (figure-1). In Nairobi, Kenya approximately 87.0 percent of the mothers had three or less children [Ref-39]. The study reveals that the infants aged six months were 4.4 percent; 7.2 percent were seven months, 13.3 percent were eight months, 12.8 percent were nine months, 10 percent were ten months, 16.1 percent were 11 months, and 36.1 percent were 12 months (table-4). The study in urban areas of Beijing, China found 50.8 percent of the infants aged six to eight months, 25.6 percent 9-11 months, and 23.6 percent aged 12 months [Ref-37]. This study found that the mothers were 88.3 percent housewives while 8.3 percent were mothers service holders, and 3.3 percent were maid servants (table-5). In Indonesia, the majority (88 percent) of mothers were housewives [Ref-30]. According to a study finding of India 92.0 percent mothers were housewives [Ref-38] According to this study 17.2 percent of respondents was Illiterate, the highest percentage of respondents (40.0) had education from class five to ten, 15.0 percent had S.S.C level education 9.4 percent had primary level education, 8.3 percent were H.S.C. passed, 3.3 percent were graduates and 6.7 percent had masters degree (table- 6). In contrast to this findings in Indonesia 50 percent of the mothers had a primary school-level education, 41 percent had a junior or senior high school-level education, and 9 percent had a college or university-level education [Ref-30].

The study reveals that the majority (97.2 percent) of the respondents were Muslims while only 2.8 percent were Hindus (figure-2). A study in Nairobi, Kenya found that 98.1 percent of the respondents were Christians. Both findings were logical Bangladesh being a Muslim majority country and Kenya being a Christian majority country [Ref-39]. According to a study finding in India the Hindus constitute 69.5 percent were among the respondents and 30.0 percent were Muslim [Ref-38]. The study reveals that the respondents having two family members were 31.2 percents; 27.2 percents had three members, 20.0 percent had four and 8.3 had five and six family members respectively, 3.3 percent had seven, and 1.7 percent had eight family members. (table-7)

Respondents coming from nuclear families were 71.1 percent and 28.9 percent came from joint families (table-8). According to a finding of a study in India 47.0 percent of the respondents came from joint families and 53.0 percent from nuclear families [Ref. 38]. Among the respondents 50 percent lived in urban areas; 35.0 percent lived in rural areas, and 15.0 percent lived in slum area (table-9).

The study in India shows that 82.5 percent of the respondents lived in urban areas and 17.5 percent lived in rural areas [Ref-38]. According to findings of this study, the family income of 6.7 percent of the respondents was less than 2100 BDT, 31.7 percent had 2100 BDT to less than 4200 BDT, 19.4 percent had 4200 BDT to less than 6300 BDT, and 19.4 percent had above 6300 BDT (table-10). According to analysis of data from Maharashtra in India family income with a majority (47.6 percent) was Rs.100-500 per month. Income was higher in the urban areas where 51.1 percent had earning of Rs.500-1,000 per month compared with 26.5 percent in rural areas [Ref-32]. According to this study the married respondents constitute 98.3 percent while 1.7 percent was divorced (table-11).

According to the findings of a study in Nairobi, Kenya the majority (91.1 percent) of the mothers was married [Ref-39]. Reveals in this study 54.4% of the respondents ideal time for starting breastfeeding was just after birth of the baby, 30.0 percent thought it was within 30 minutes after birth, 2.8 percent thought it was any time after birth, 5.0 percent thought it was one day after birth, 6.1 percent thought it was two days after birth, and 1.7 percent did not know (table-12). In Nepal the mothers initiating breastfeeding within half an hour of birth was 43.5 percent. (Ref-29).

The study reveals that 6.7 percent of the respondents thought that duration of breastfeeding should have been up to six months, while 1.7 percent thought it should have been one year and 46.7 percent thought it should have been two years. The respondents thought it should have been according to demand of the infants constituted 35.0 percent while 10.0 percent did not know (table-13). According to a study finding in the WHO breastfeeding should have been continued up to two years or beyond [Ref-7]. In Nepal a study that found 26.9 percent of the mothers said they breastfed their children on demand. Almost 17 percent of the mothers breastfed at regular intervals irrespective of the child's demands and 55.7 percent used both methods [Ref-29].

The majority, 97.2 percent, of the respondents currently breastfed their infants and 2.8 percent didn't (table-14). According to a study the majority, 85 percent, of the infants in Indonesia were currently being breastfed [Ref-30]. Most of the respondents, 98.9 percent, currently gave complementary foods to their children and 1.1 percent did not (table-15). The finding of this study was consistent with the WHO recommendation according which infants should have been given complementary foods from six months of age [Ref-7]. respondents currently breastfed their. The majority, 96.1 percent, of the respondents started complementary feeding at the age of six months and only 3.9 percent started it before six months of age (figure-3). In Nepal the age of starting complementary feeding ranged between one and 15 months. The highest percentage of mothers (38) reported starting it at the age of six months in sharp contrast with that of Bangladesh; 9.9 percent mothers started complementary foods by three months, and 29.6 percent by 5 months [Ref-29].

Since the start of giving complementary foods 37.8 percent gave infant formula milk (diluted), 14.4 percent gave cow's milk/goat milk (diluted), 1.1 percent gave cows/goats milk (not diluted), 16.1% gave rice/rice powder/suzi (without milk), 46.7 percent gave suzi with milk, 17.2 percent gave infant formula cereals (cereals), 12.2 percent gave vegetables, 25.0 percent gave egg, 5.6 percent gave fish, 64.4 percent gave khichuri, 26.7 percent gave fruits, 1.1 percent gave noodles, 4.4 percent gave pulse/dal, and 0.6 percent gave other foods [table-16].

It should be noted that a large percentage of the respondents were found to be giving more than one complementary foods to their infants; so the total percentage far exceed 100 percent. According to Subba, in Nepal, buffalo milk was the most commonly used item with 88 percent mother giving this milk to their infants and 45.6 percent of the mothers giving diluted milk before feeding. Most commonly used complementary food was home prepared gruel in the form of *lito* (rice and sugar preparation) or *jawlo* (salt rice preparation with butter); 21.1 percent of the mothers said that they gave tea to their children [Ref-29]. Selection of milks and other complementary food items in Bangladesh and Nepal compared, it becomes apparent that mothers in both countries chose locally available food items. However, the tendency of the mothers in Bangladesh towards baby formula is not seen among the mothers in Nepal. This may be due to the fact that cow/buffalo milk is not easily available in Bangladesh and it is expensive as well. As the findings of this study suggest 9.4 percent of the re-

spondents did not give certain foods due to prejudice while 6.1 percent did not give certain foods for financial constrain, and 59.4 percent for other reasons (one reasons being reluctance on the side of the baby). In case of 25.0 percent of the respondents, this was not applicable (table-17).

According to this study the majority of the respondents, 99.4 percent, had knowledge about food consistency and 0.6 percent didn't (table-18). In India a study found that 25.5 percent of the mothers of children had proper knowledge about consistency of food [Ref-38]. A large number of respondents, 35.6 percent, preferred liquid foods, 19.4 percent semi-solid, and 45.0 percent liquid and semi-solid (table-19). In Andhra Pradesh in India a study found that semisolids were preferred by 52 percent of mothers and solids were preferred by 44.8 percent mothers [Ref-24]. The majority of the respondents and caregivers, 97.8 percent, though that there was a need of food variety during complementary feeding and 2.2 percent did not (table -20). The study reveals that of the respondents 58.9 percent thought that complementary foods should have been provided after breastfeeding while 31.1 percent suggested no breastfeeding after starting complementary feeding, 8.9 percent suggested it before breastfeeding, and 1.1 percent was ignorant about it (table-21).

The study reveals 30.0 percent of the respondents thought that complementary feeding was essential during illness while the rest 70.0 percent suggested it was not essential during illness (table-22). This finding had similarity with the findings of a study in Gujarat, India, which indicated that three-fourths of the children ate much less and reduced fluid intake during illness while the food and fluid intake of the remaining children under study remained unchanged during illness. The majority of the mothers, 70.0 percent, reported feeding the child less breast milk than usual and only 3 percent of the mothers reported feeding more than the normal amount of breast milk [Ref-25].

According to findings of this study 28.3 percent of the respondents and caregivers were feeding complementary foods four hourly (6 times), 23.9 percent were feeding as their infants demanded, 15.0 percent were feeding six hourly (four times), 12.2 percent three hourly (8 times), 11.1 percent twice a day, 6.7 percent two hourly (12 times), and 2.8 percent one hourly (Figure-4). According to a study in Nepal the frequency of complementary feeding ranged from 1 to 6 times 41.7 percent mothers gave complementary foods three times a day, 47.3 percent gave them only one to time per day, 7.0 percent gave complementary foods four to five times, the rest gave more than five times a day [Ref-29].

According to this study majority, 70.0 percent, of the respondents suggested that there was no need of complementary feeding during illness while 30.0 percent thought it was necessary (table-25). In South Asia according to a study over 80 percent of mothers believed that a child with diarrhea should not have been given food. According to the same study in rural Nigeria 60 percent of mothers would reduce fluids for a child with diarrhea. However, in rural Bangladesh 22 percent of mothers said they stopped breastfeeding when their children had diarrhea [Ref-26]. The study reveals that 99.3 percent of the respondents were interested in preparing complementary food and 6.7 percent weren't (table-23). In Beijing, China only 21.9 percent were interested preparing complementary feeding and 78.1 percent weren't [Ref-37]. This study finds 67.8 percent of the respondents felt interested in complementary feeding for proper growth and development of their children; 17.2 percent felt interested out of love and affection for their infants; 22.8 percent felt interested because they were mothers; and 10.6 percent were interested because their children like such feeding; and 0.6 percent didn't know (Table-24). The study finds that 10 percent of respondents provided complementary feeding in hurry; while 87.8 percent fed their children slowly; and 13.9 percent fed patiently (table-25). The majority of the respondents, 97.8 percent, gave complementary foods after illness and 2.2 percent didn't (table-26). In South Asia a study reveals that 55.0 percent provided complementary food after recovery [Ref-26].

This study shows that 22.2 percent of the respondents used tube-well water for preparation of complementary foods, 1.1 percent used boiled river water, 18.9 percent used un-boiled river water, and 57.8 percent used tap water (boiled) (table-27). In Somaliland, according to a study, 85.9 percent of the surveyed households collected water from piped/tap water systems while some 2.8 percent drew water from other sources like river bed, dam or tube well [Ref-34]. The majority of the respondents, 99.4 percent, washed their hands and utensils properly before feeding, and 0.6 percent didn't (table-

28). This finding was very consistent with that of a Sudanese Journal, according to which 94.1 percent respondents washed hands before food handling [Ref-35]. The majority of the respondents, 91.1 percent, used sanitary latrine and 8.9 percent used *kacha* latrine.

This finding indicates high level of awareness in Bangladesh about hygienic latrine (table-29). This finding shows that compared to Bangladesh use of pit (*kacha*) latrine was very high in Sudan; use of sanitary or septic latrine was also much low in Sudan—38.3 percent respondents used septic latrine [Ref-35]. Most of the respondents, 97.2 percent, washed hands after coming from toilet and 2.8 percent didn't (table-30). The findings in Somaliland were significantly consistent with this study on the matter of washing hands after coming from toilet—with 63.2 percent washing their hands after defecation [Ref-34]. Almost all respondents, 99.4 percent, covered complementary foods after preparation; only 0.6 percent didn't (table-31). This finding showed a contrast with the finding of a study published in journal in Sudan where 41.4 percent covered food and 58.6 percent didn't [Ref-35]. This showed a greater awareness of the taking care of food in Bangladesh after preparation.

The respondents preparing complementary foods with family food was 17.2 percent; 79.4 percent prepared them separately; and 3.3 percent prepared complementary foods in both ways (Figure 6). The study reveals the majority of the respondents, 97.2 percent, received advice from others regarding complementary feeding and 2.8 percent didn't (table-32). The majority of the respondents 83.3 percent attended meeting on complementary feeding and 16.7 percent didn't (table-33). This study reveals that of the respondents 88.9 percent preferred to have awareness programs from television, 13.3 percent from radio, 2.2 percent from street drama, and 7.8 percent from others (table-34). These findings are in contrast in the tribal areas in Andhra Pradesh where 45.5 percent of the respondents preferred to have awareness program on radio, 28.5 percent on television, and 4.7 percent in newspaper [Ref-24].

The majority, 87.2 percent, of the respondents said that counseling service on complementary feeding should be provided at health center; 2.8 percent said it should be provided at school/college, and 1.0 percent said it should be provided in both health center and school/college (table-35). The study reveals that 50 percent of the respondents received information about complementary feeding from television/radio; 74.4 percent from health workers; 16.7 percent from friend/families, and 3.3 percent from newspapers, magazines, posters, and pamphlets (figure 7). In India most of the respondents, 76.2 percent, received advice about complementary feeding from their mothers [Ref-21].

CONCLUSION

The findings have resulted from a cross sectional study done to assess the level of knowledge, attitude, and practice of infant feeding among 180 mothers and caregivers at Shishu Hospital, Pediatrics OPD in Dhaka, Bangladesh. The mothers and caregivers were selected purposively. One unique feature of this cross sectional study is that all of the respondents aged 18 to 40 years were female with 96.1 percent mothers and 3.9 percent caregivers suggesting it was mainly the mothers who took care of infant feeding of their children.

It is very important that infants are provided proper, adequate and timely complementary feeding in addition to breast milk from the age of six months up to at least 24 months for their growth physical and mental. That the poorly fed children remain malnourished is evident from various studies. The findings of this study awareness level of mothers about providing infant feeding measured on nominal scale is very impressive. The high awareness level is also reflected in the attitude of mothers about infant feeding. According to findings of this study, respondents feeling interested in preparing complementary feeding were 99.3 percent. A high percentage (percent) of the respondents felt interested in complementary feeding for proper growth and development of their children.

This study also found that knowledge level among the mothers about both breastfeeding and infant feeding was high with 54.4 percent thinking that the ideal time for breastfeeding was just after birth of baby and 46.7 percent thinking that the duration of breastfeeding should have been up to two years. Most of the respondents 98.9 percent gave infant foods to their children and 99.4 percent mothers had knowledge about food consistency. The majority of the respondents (97.8 percent) thought that there

was a need of food variety during infant feeding. A high percentage of respondents (58.9 percent) thought that infant foods should have been provided after breastfeeding. The knowledge level was also reflected in practices with 57.8 percent using boiled water for preparation of infant foods, the majority (99.4 percent) washing their hands and utensils properly before feeding and 97.2 percent washing hands after coming from toilet. These practices are very hygienic.

Malnourishment is indeed a health problem in many developing countries in the world including Bangladesh. The children of poor families in particular suffer most out of malnutrition caused by low purchase ability. Natural disasters such as floods that hit Bangladesh regularly aggravate situation among the poor families in the rural areas in particular. Deficiencies of iodine, iron and vitamin-A are endemic in hard-to-reach areas. Deficiency of these micronutrients causes severe malnutrition that makes children susceptible to impaired intellect, blindness and other health disorders.⁴⁰

This makes availability of infant foods and knowledge, attitude, and practices absolutely necessary for children that protect them from malnourishment, stunted growth and other health hazards. In addition to what individual families can do for their children, the government and development NGOs have a role to play defined and guided by national nutrition programs. Well-planned and long-term community nutrition services is unavoidable in combating malnutrition that affects a large percentage of Bangladeshi population. The government also needs to undertake massive educational and awareness programs targeting different groups of people so that mothers in particular can perform best and give away superstition and best utilize their capacities.

RECOMMENDATIONS

Following are some recommendations to improve level of awareness of nutritional knowledge, attitude, infant feeding practices, and access to information:

- a. A baby should be put to the breast soon after birth to make sure that the colostrums that prevent diseases and increase immunity is not missed. It is also important to breastfeed infants within one hour after birth.
- b. Exclusive breastfeeding for the first six months of life should be guaranteed, which should continue at least up to two years.
- c. Mothers should start providing appropriate complementary feeding to their infants from the age of six months, which is also recommended by WHO.
- d. Mothers should discard superstition about certain food items. What they must care about is that safe complementary foods are started timely as recommended by WHO. They also should provide complementary foods adequately and properly to make sure the children get sufficient energy, protein, and micronutrients.
- e. Complementary foods should be prepared, fed and stored safely.
- f. The doctors, nurses, and midwives at the hospitals should council mothers, caregivers, attendants, and family members.
- g. The government should adopt appropriate policies and programs to raise awareness among mothers and families through its outlets at the grassroots levels. The poor families and their malnourished children should get greater attention from the government and the NGOs.

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