



## Breastfeeding knowledge, attitudes, and practices among rural mothers: insights from a hospital-based cross-sectional study

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### ABSTRACT

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Breastfeeding is vital for reducing infant mortality and ensuring normal growth and development in children. This cross-sectional study was conducted to assess the knowledge, attitudes, and practices (KAP) of breastfeeding among rural lactating mothers in Bangladesh. A total of 149 mothers attending the Upazila Health Complex in Mirsarai, Chattogram, were interviewed using a semi-structured questionnaire. Participants were aged  $\leq 25$ , 26-30, and  $\geq 31$  years, with a mean age of 25 years. Regarding knowledge, 45% had "Good Knowledge," while 16% had "Excellent Knowledge." In terms of attitude, 78% displayed a "Positive Attitude" toward breastfeeding, with no negative attitudes reported. In the practice domain, 43% demonstrated "Very Good Practice," while 23% had "Excellent Practice." Only 6% exhibited poor practices. The findings indicate that rural lactating mothers generally have positive attitudes and good breastfeeding practices, with most possessing Good to Excellent knowledge (61%). The study recommends targeted education, community support, peer counseling, and hands-on training to further enhance breastfeeding practices. Addressing barriers and conducting longitudinal studies are also suggested to sustain improvements while respecting cultural norms and values.

### Introduction

Breastfeeding is universally acknowledged as the optimal method of infant feeding, providing essential nutrients, antibodies, and significant health benefits for both infants and lactating mothers (WHO, 2021). The World Health Organization recommends exclusive breastfeeding for the first six months of life, followed by continued breastfeeding alongside complementary foods up to two years or beyond (WHO, 2021). Despite these recommendations, global exclusive breastfeeding rates remain below optimal levels due to factors such as socio-cultural beliefs, economic constraints, and healthcare practices (Victoria *et al.*, 2016).

In rural areas, where access to healthcare resources is limited and cultural practices strongly influence maternal and child health behaviors, breastfeeding practices can differ significantly from those in urban settings. Rural lactating mothers often face challenges like inadequate breastfeeding support, limited healthcare access, and traditional beliefs that may hinder breastfeeding (Olatona *et al.*, 2019). These factors highlight the importance of understanding the knowledge, attitudes, and practices (KAP) related to breastfeeding among rural populations.

Research indicates that knowledge about breastfeeding benefits is crucial in initiating and sustaining breastfeeding (Ajibade *et al.*, 2020). Mothers who are informed about the nutritional and immunological advantages of breast milk are more likely to exclusively breastfeed for the recommended duration (Kumar *et al.*, 2022). Conversely, misinformation or lack of awareness can result in early cessation or non-initiation of breastfeeding (Lutter *et al.*, 2021). Attitudes towards breastfeeding are shaped by cultural norms, social support, and personal experiences. Positive attitudes correlate with longer breastfeeding durations and higher rates of exclusive breastfeeding (Ajibade *et al.*, 2020), while negative attitudes, often driven by misconceptions or social pressures, can obstruct breastfeeding initiation and continuation (Kumar *et al.*, 2022).

Breastfeeding practices among rural mothers are influenced by factors such as socio-economic status, education, employment, and access to healthcare. Barriers like returning to work shortly after childbirth, lack of privacy, and perceived insufficient milk supply often contribute to suboptimal breastfeeding practices (Olatona *et al.*, 2019). Understanding these factors is critical for developing interventions aimed at promoting

breastfeeding in rural communities. Effective programs often involve healthcare providers, community leaders, and policymakers, and may include culturally sensitive educational campaigns and breastfeeding-friendly policies in workplaces and public spaces (Victoria *et al.*, 2016).

In summary, breastfeeding remains crucial for infant health, especially in rural areas where socio-cultural and logistical barriers impact breastfeeding practices. This study aims to assess the KAP related to breastfeeding among rural lactating mothers in a hospital-based setting. By identifying gaps in knowledge, understanding attitudes, and exploring current practices, this study seeks to inform targeted interventions and policies that promote optimal breastfeeding in rural communities.

## Materials and Methods

### Study design

This cross-sectional study was conducted to assess the socio-demographic characteristics, knowledge, attitude, and practices (KAP) related to breastfeeding among rural lactating mothers. The study took place from September 2021 to February 2022. The initial phases involved literature review, protocol preparation, and the development of a questionnaire. Data collection began in the third week of September 2021 and was completed by the last week of November 2021. Data processing and analysis occurred throughout December 2021, followed by report writing and interpretation, which were finalized in February 2022.

### Study location

The study was conducted at Mirsarai Upazila Health Complex in Chattogram, Bangladesh. This 50 bedded rural government hospital, included 10 bedded child ward, served as an ideal study site due to its representation of the socio-demographic characteristics of rural lactating mothers in Bangladesh. The cooperative hospital administration also facilitated the study, making it a practical choice for data collection.

### Study population

The study population comprised rural lactating mothers from Chattogram, specifically those

admitted to Mirsarai Upazila Health Complex with their children during the study period.

### Sample size

The sample size was estimated using the formula for cross-sectional surveys:

$$\text{Sample size } n = \frac{Z^2 P(1-P)}{d^2}$$

Where:

$Z=1.96$   $Z = 1.96$   $Z=1.96$  (corresponding to a 95% confidence level)

$P=0.5$   $P = 0.5$   $P=0.5$  (assuming a 50% prevalence rate)

$d=0.05$   $d = 0.05$   $d=0.05$  (precision level)

The estimated sample size was 386. However, due to limitations, the final sample size included 149 rural lactating mothers.

### Development of data collection tools

A semi-structured questionnaire was developed in English based on the study's objectives, covering socio-demographic information, knowledge, attitudes, and practices regarding breastfeeding. The socio-demographic section included questions on hospital admission reasons, maternal and child age, family type, education, income, and delivery details. The knowledge section had 8 dichotomous and 2 multiple-response questions, scored based on correctness. The attitude section included 10 statements with positive and negative narratives, scored from 1 to 3 depending on agreement levels. The practice section had 7 dichotomous and 3 multiple-response questions, scored similarly. The tool was pre-tested on 10 lactating mothers for clarity and adjustments were made accordingly.

### Data collection techniques

Data were collected through face-to-face interviews in a comfortable setting. Each respondent was thanked at the end of the interview.

### Data processing and analysis

Data were entered into SPSS (version 20), cleaned, and checked for normal distribution. Knowledge was categorized as Poor, Average, Good, Very Good, or Excellent. Attitudes were classified as Negative, Neutral, or Positive, while

practices were ranked as Poor, Average, Good, Very Good, or Excellent based on standardized scoring criteria.

## Results

### Socio-demographic characteristics of the respondents

#### Reasons of hospital admission of their children

The respondents were asked for the problems of their children with admitted. Maximum (45.6%) respondents were admitted with their child for RTI and nearest proportion (43%) admitted for AGE of their children. The mothers of the children admitted for (PUO) accounted 11.4% (Table 1).

**Table 1:** Socio-demographic characteristics of the respondents (n=149)

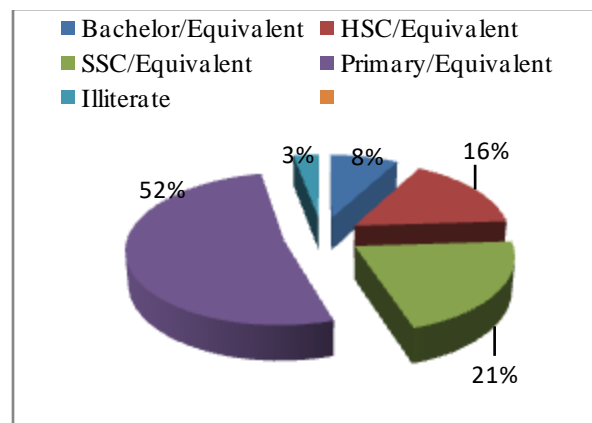
Socio-economic characteristics	Frequency	%	
Reasons of Hospital Admission	Respiratory Tract Infection (RTI)	68	45.6
	Acute Gastroenteritis (AGE)	64	43.0
	Pyrexia	17	11.4
	Unknown		
	Origin (PUO)		
Age of respondents' children	≤6 months	24	16.0
	7-12 months	47	31.5
	13-18 months	49	33.0
	19-24 months	29	19.5
Age of respondents	≤25 Years	72	48.3
	26-30 Years	58	38.9
	≥31 Years	19	12.8
No. of Children	1-2	80	53.6
	3-4	61	41.0
	≥5	8	5.4
Frequency of Hospital admission	1-2 time(s)	134	90
	3-4 times	15	10
Type of Family	Nuclear Family	82	55.0
	Joint Family	67	45.0
Monthly family income	<10,000	61	41
	10,000-20,000	53	35.6
	>20,000-30,000	32	21.5
	>30,000	03	2.0

Age of hospital admitted children of the respondents: Among the respondents, maximum one-third (33%) were admitted with (13-18)

month old children and the nearest proportion (31.5%) of the respondents found to admit with 7-12 months old children. About 20% of the respondents were admitted for their (19-24) old children and the least accounted 16% of the respondent. Minimum, maximum and mean ages of their children were 1, 24 and 14 months respectively (Table 1).

#### Age of the respondents

Among the respondents, approximately half of them were ≤25 years old. The respondents of (26-30) years old constituted about 39% and the least accounted (12.8%) ≥31 years old. Minimum, maximum and mean ages of the respondents were 17, 35 and 25 years respectively (Table 1).



**Figure 1:** Distribution of the respondents based on their educational qualification (n=149)

#### Educational qualification of the respondents

Among the respondents highest proportion (52%) attended Primary or Equivalent education. Second highest proportion was 21% with SSC or equivalent educational level. The respondents with HSC or equivalent education constituted 16%. The Bachelor or equivalent degree holder respondents constituted 8%. Very few (3%) respondents were found illiterate (Figure 1).

#### Occupation of the respondents

The respondents were asked for their occupation. Almost respondents, about 90% were housewife. Few (8.1%) respondents were found service holder and very few (2.7%) of them were engaged with business.

### ***Number of children of the respondents***

The respondents were asked for their number of children. The respondents with (1-2) children formed maximum proportion (53.6%) and the next highest proportion (41%) respondents had (3-4) children. The least (5.4%) of the respondents were found to have ( $\geq 5$ ) children (Table 1).

### ***Frequency of hospital admission for their children***

The respondents were asked to inquiry about frequency of hospital admission or to see the doctors for their children. Almost (90%) respondents reported that they admitted in hospital or see the doctor (1-2) times and only 10% of them found admitted hospital or see the doctor (3-4) times within their lactating period (Table 1).

### ***Religion of the respondents***

Among the respondents almost (80%) respondents were found to belonging Islam as their religion and others (20%) reported that they used to follow Hinduism.

### ***Family type of the respondents***

The respondents were asked about the types of family they lived in. Greater portion (55%) of the respondents reported that they were living in Nuclear family and the rests of them were found to belonging Joint family (Table 4.6]

### ***Monthly family income***

Among the respondents, more than 40% found with <10,000 BDT monthly family income. Around 36% respondents' monthly family income found (10,000-20,000) BDT. More than one-fifth (21.5%) respondents were found with (>20,000-30,000) BDT income in their family. Very few (2%) respondents were with >30,000 BDT monthly income. Among the respondents, lowest monthly income was 5000 BDT and highest 50,000 BDT. Their mean income was 12,800 in BDT (Table 1).

### ***Antenatal Care (ANC)***

The respondents were asked to inquiry about ANC. Almost (83%) respondents who were found

to receive ANC and others (17%) did not receive ANC (Table 2).

### ***Number of ANC received by the respondents***

Among the respondents who received ANC, about two-third (63%) of the respondents received ANC (1-2) times and the rest (37%) received ANC (3-4) times (Table 2).

**Table 2:** Distribution of the respondents based on ANC received or not and place of delivery

Antenatal Care (ANC)	Frequency	%
Yes	124	83
No	25	17
Number of ANC received		
1-2 Times	77	63.0
3-4 Times	47	37.0
Place of delivery		
At Home	41	27.5
At Hospital	108	72.5

### ***Professionals ANC provided to the respondents***

The respondents were asked for inquiry the type of professionals provided them ANC. Third-fourth proportion of the respondents received ANC from Nurse/Midwife. On the other hand, the rests of the respondents found to receive ANC from Doctor and FWV. Among them 17% respondents received ANC from Doctor and other (8%) were provided ANC by FWV.

### ***Place of delivery of the respondents***

The majority (72.5%) of the respondents reported that they gave birth of children at hospital. The rests (27.5%) were found to give birth of children at home (Table 2).

### ***Delivery care provider of the respondents at home***

Among the respondents who gave birth at home, almost (93%) delivery service received from Village Dai and others (7%) conducted their child delivery by Nurse/Midwife at home.

### ***Delivery care provider at hospital***

The respondents who received delivery care at hospital were asked for their delivery service provider. Among them almost (86%) respondents received delivery care from the Nurse or Midwife

and the rests were provided delivery care by the Doctors.

### Type of delivery of the respondents

The mothers gave birth in delivery were asked for their mode of delivery. Almost (92%) delivered their children through NVD and the rests only (8%) gave birth through CS Operation.

### Knowledge regarding breast feeding

There are a total of ten characteristics regarding knowledge of breastfeeding. First eight attributes were inquired through dichotomous question, “Yes” and “No”. The rests were inquired by multiple responses (Table 3).

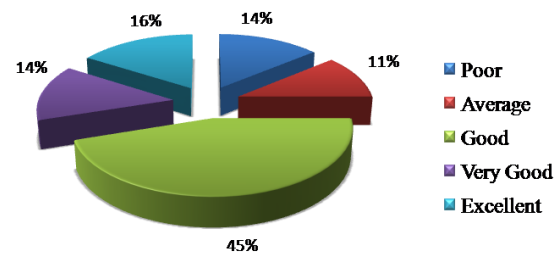
**Table 3:** Distribution of the respondents based on response to the knowledge regarding breast feeding (n=149)

Knowledge related characteristics	Yes F (%)	No F (%)
1. Do you think it is important to exclusively breastfeed your baby for up to 6 months?	140 (94)	9 (6)
2. Do you think breast milk is nutritious enough for a baby?	121(81)	28(19)
3. Whether breast milk is helpful in preventing the disease of the baby?	59(40)	90(60)
4. Is it important for the baby to start breastfeeding within 1 hour of birth?	102(68)	47(32)
5. Breastfeeding strengthens the bond between mother and child. What do you think?	95(64)	54(36)
6. Breastfeeding can prevent diarrhea. What did you say?	32(22)	117(78)
7. Breastfeeding can prevent mother’s breast cancer. What do you think?	32(22)	117(78)
8. Breast milk has a role in preventing pneumonia. What did you say?	36(24)	113(76)

Almost (94%) respondents thought that up to 6 months exclusive breast feeding is important except very few (6%). Except (19%) respondents, they believed that breast milk is adequately nutritious for the baby. Majority (60%) of lactating mothers did not know that breast milk is helpful in

preventing diseases. On the other hand (40%) knew that breast milk can prevent diseases. About (70%) of the respondents thought that starting breastfeed within one is important but the rest (30%) did not know. About two-third (64%) of respondents knew that Breastfeeding strengthens the bond between mother and child except the rest (36%). Least (22%) of the mothers knew that breastfeeding can prevent diarrhea. The rest of them did not know in this regard. Almost (78%) of the lactating mothers did not know that breastfeeding can prevent breast cancer. Almost (76%) mothers did not know that breastfeeding even can prevent pneumonia. The rest (24%) knew in this regard (Table 3).

Third-fourth (75%) of lactating mothers knew the tenure of exclusive breastfeeding. The remaining (25%) didn’t know it. Though most (82%) mothers knew that how many months should keep breastfeeding of the baby but 18% didn’t know that.



**Figure 2:** Overall Knowledge of lactating mothers regarding Breastfeeding (n=149)

### Overall Knowledge regarding breastfeeding

Knowledge regarding breastfeeding was leveled into five categories. Highest proportion (45%) lactating mothers found to have “Good Knowledge” and (16%) had Excellent Knowledge. The respondents with “Poor Knowledge” and “Very Good Knowledge” constituted equal proportion (14%) respectively. Least (11%) found with “Average Knowledge” (Figure 2).

### Attitude regarding breastfeeding

In order to measure the attitude of the mothers regarding breastfeeding the attitude part of questionnaire was constituted with the combination of positive and negative description about breastfeeding. This part of questionnaire

was built with 10 attitude related characteristics regarding breastfeeding. Among these characteristics, no. 1, 4, 6, 7, 8 and 10 described positive and 2, 3, 5, & 9 described negative

concept about breastfeeding. Finally the attitude of mothers were calculated and presented in the order of Positive, Neutral and Negative (Table 4).

**Table 4:** Distribution of the respondents based on their attitude (n=149)

Attitude related Characteristics	Positive Attitude F(%)	Neutral Attitude F(%)	Negative Attitude F(%)
1. Breastfeeding should be continued up to two years.	141(97)	5(3)	00
2. After birth, the baby should be fed honey before breastfeeding.	62(42)	64(43)	23(15)
3. Canned milk is better than breast milk.	61(41)	74(50)	14(9)
4. Breastfeeding strengthens the relationship between mother and child.	73 (49)	70 (47)	6(4)
5. Breastfeeding harms the health of the mother.	55(37)	83(56)	11(7)
6. Breastfeeding can prevent breast cancer.	14(9)	71(48)	64(43)
7. Breastfeeding a baby strengthens the parent-child relationship.	53(36)	75(50)	21(14)
8. Breast milk can prevent respiratory diseases in children.	16(11)	82(55)	51(34)
9. Breastfeeding alone is not enough for a baby up to six (6) months.	32(22)	57(38)	60(40)
10. Breast milk is beneficial preventing diarrhea in the baby.	46(31)	89(60)	14(9)

Almost everyone (97%) of the mothers found to have Positive Attitude in this context of attitude. Among the very few were found with Neutral (3%) and there were found no Negative attitude of the mothers in this regard. The mothers with Positive Attitude and Negative Attitude in this point constituted proportions with closest difference. They constituted (42%) and (43%) respectively. Least (15%) were found with "Neutral Attitude". Half of the lactating mothers had Neutral Attitude in this regard. Respondents with "Positive Attitude" constituted (41%) and the rest (9%) were found with Negative Attitude (Table 4).

About half of the respondents were with Positive Attitude in this regard. The closest proportion (47%) respondents were found with "Neutral Attitude" and the rest were very few (4%) found Negative. With this point highest (56%) of the mothers found "Neutral Attitude". Greater than one-third (37%) of the respondents found with "Positive Attitude" and the rest (7%) had "Negative Attitude".

Highest about half (48%) of the respondents were found with "Neutral Attitude". Respondents with "Negative Attitude" formed (43%) of the

respondents. Only (9%) found with "Positive Attitude" (Table 4).

Respondents having "Neutral Attitude" constituted half (50%). 36% of mothers found with "Positive Attitude" in this context of attitude. Least (14%) of them were found Negative.

Highest proportion (55%) of mothers found Neutral Attitude with this context of breastfeeding. About one-third (34%) of them were found with "Negative Attitude". Only (11%) respondents were found Positive.

In this context of breastfeeding, highest (40%) respondents were found with "Negative Attitude". 38% of the respondents were found "Neutral" and the 22% of them had Positive.

60% of mothers were found with "Neutral Attitude" in this context. About one-third (31%) of the respondents found with "Positive Attitude" and very few (9%) them were Negative with this context (Table 4).

#### **Overall attitude regarding breastfeeding**

Among the lactating mothers, Most (78%) of them found with Positive Attitude and the rest (22%) found with “Neutral Attitude”. There is found no “Negative Attitude” among the lactating mothers.

### Practice of lactating mothers regarding breastfeeding

As In order to the study aimed to measure the practices of lactating mothers regarding breastfeeding, the practices part of questionnaire was constituted with a total of (10) breastfeeding practice related attributes. Attributes (1-7) were constituted with dichotomous responses. The rests (8-10) were constituted with multiple responses.

**Table 5:** Distribution of the respondents based on response to the practice regarding breast feeding (n=149)

Practice Questions	related	Yes F (%)	No F (%)
1. Do you wash your hands before breastfeeding?		117(78)	32(22)
2. Do you wash your breasts before breastfeeding?		61(41)	88(59)
3. What else to feed the baby besides breast milk?		108(73)	41(27)
4. Do you keep eye to eye contact on the baby while breastfeeding?		85(57)	64(43)
5. Do you spit on the breast before breastfeeding the baby?		98(66)	51(34)
6. Whether the cleanliness of mother and baby clothes is satisfactory?		123(83)	26(17)
7. Is the cleanliness of mother's hand satisfactory?		129(87)	20(13)

Almost (78%) all of mothers reported that they used to wash hand before breastfeeding their child except (22%). Most (59%) of the mothers admitted that they didn't wash breast before breastfeeding their baby. The rest used to wash breast. Most (73%) of the mothers told that they feed something their children other than breastfeeding x. Majority (57%) of the mothers used to keep eye on the baby while breastfeed their child. Others didn't do it (Table 5).

Among the respondents tow-third of the respondents confessed that they were spitting on breast before breastfeeding their baby. Most (83%) of the mothers' and child's clothing found clean. Others' clothing were not satisfactorily clean. Almost (87%) mothers' hand found clean satisfactorily except the rest of the respondents (Table 5).

Among the mothers (77%) found with Correct Practice who fed breast milk at first after birth. Significant proportion (23%) of the respondents found to fed Honey or Glucose water after birth and first time food of life

Among the respondents about half (53%) found with Correct Practice who started breastfeeding within 1 hour after birth. The rest (47%) didn't start breastfeeding within due time. Among the repondent 49% were found with Incorrect Practice who didn't breastfeed their child maintaining standard interval. The rest were found with Correct Practice in this context.

### Overall breastfeeding practice level of mothers

Highest proportion (43%) of the respondents found with “Very Good Practice”. Next greater proportion (28%) of them found to having “Good Practice” in breastfeeding to their child. Respondents with “Excellent Practice” constituted (23%) and very few (6%) were found with Poor Practice.

### Discussion

#### Sample profile of the respondents

In this study the respondents were inquired for the reasons of hospital admission for their children. Maximum (45.6%) respondents were admitted with their child for RTI and nearest proportion (43%) admitted for AGE of their children. The mothers of the children admitted for (PUO) accounted 11.4%. The study explore that the nursing baby were admitted into the primary healthcare center only for three reasons that were RTI, AGE and Fever. According to previous study there are strong relationship between reasons of hospital admission and breastfeeding of infants. Quigley *et al.*, (2007) revealed that proper breastfeeding practices could prevent a substantial proportion of hospital admissions due to diarrhea and lower respiratory tract infection.

Current study enquired for the age of the lactating children. Among the respondents, maximum one-third (33%) were admitted with (13-18) month old children and the nearest proportion (31.5%) of the respondents found to admit with (7-12) months old children. About 20% of the respondents were admitted for their (19-24) old children and the least accounted 16% of the respondent. Minimum, maximum and mean ages of the children were 1, 24 and 14 months respectively.

Age of the participants is important for any study with human subject. Among the respondents, approximately half of them were  $\leq 25$  years old. The respondents of (26-30) years old constituted about 39% and the least accounted (12.8%)  $\geq 31$  years old. Minimum, maximum and mean ages of the respondents were 17, 35 and 25 years respectively. A KAP study on EBF identified minimum, maximum and mean age of the respondents 16, 23 and 19 years respectively (Alex, 2017).

Undisputedly education has important implication on the knowledge about any field. Among the respondents highest proportion (52%) attended Primary or Equivalent education. Second highest proportion was 21% with SSC or equivalent educational level. The respondents with HSC or equivalent education constituted 16%. The Bachelor or equivalent degree holder respondents constituted 8%. Very few (3%) respondents were found illiterate. Study conducted by Kumar *et al.*, (2015) in Uttarkhand inquired the education of the mothers similarly but 23% illiterate mothers. In that study about 29% of the participants were found who had primary education. Participants with Higher Secondary education were found almost similar between the current and the referred study. The participants with higher secondary education were 21% and 22.4% respectively. Current study explored about double participants with HSC education in comparison to the referred study. These two studies constituted 16% and 8.4% respectively. Conversely the current study and the referred study constituted the participants with graduate and above education level. The participants with highest education formed 8% and 17.4% respectively (Kumar *et al.*, 2015).

As the occupations of the respondents are important in any study with human subject the respondents were inquired for their occupation. Almost respondents, about 90% were housewife.

Few (8.1%) respondents were found service holder and very few (2.7%) of them were engaged with business. The study conducted by Kumar *et al.* in 2015 explored 98% were housewife and 2% of the respondents found Service Holders. But Current study also explored 2.7% self employed mothers.

The lactating mothers were queried about their number of children. The largest group, constituting 53.6% of respondents, had 1 to 2 children. Following this, 41% of the respondents had 3 to 4 children. The smallest group, at 5.4%, had 5 or more children. In a similar KAP study by Ramawat *et al.* (2017), 36% of mothers had 1 child, while the remaining 64% had more than 1 child.

The respondents were interviewed to inquire about frequency of hospital admission or to see the doctors for their children. Almost (90%) respondents reported that they admitted in hospital or see the doctor (1-2) times and only 10% of them found admitted hospital or see the doctor (3-4) times within their lactating period.

Previous study suggests relationship between frequency of hospital admission and breastfeeding with particular diseases of infant. Quigley *et al.*, (2007) revealed that proper breastfeeding practices could prevent a substantial proportion of hospital admissions due to diarrhea and lower respiratory tract infection.

Among the respondents almost (80%) respondents were found to belonging Islam as their religion and others (20%) reported that they used to follow Hinduism. A study on EBF conducted by Rana *et al.* (2021) revealed 79.5% Muslims and the rests of the respondents were Non-Muslims.

According to the type of family most of the respondent reported that they were living in Nuclear family and the rests of them were found to belonging Joint family. Another study conducted among the rural mothers of Rajshahi revealed 79.5% were living in Joint Family and the rests were leading Nuclear Family life. There was a significant difference between the rural lactating mothers in this regard (Rana *et al.*, 2020)

Income has significant roles in every sphere of our life. Among the respondents, more than 40% found with  $< 10,000$  BDT monthly family income. Around 36% respondents' monthly family income



found (10,000-20,000) BDT. More than one-fifth (21.5%) respondents were found with (>20,000-30,000) BDT income in their family. Very few (2%) respondents were with >30,000 BDT monthly income. Among the respondents, lowest monthly income was 5000 BDT and highest 50,000 BDT. Their mean income was 12,800 in BDT. A study conducted on EBF among rural mothers of Rajshahi revealed about 60% of the family had less than 10,000 BDT monthly incomes. Rests of the respondents' family revealed more than 10,000 BDT per month. There is revealed significant difference of income between two divisions.

Almost (83%) all respondents who were found to receive ANC and others (17%) did not receive ANC. A study of India entitled "KAP study regarding breast feeding among post-natal mothers: a questionnaire based survey" conducted by Choudhary (2021) found that 93% mothers received ANC and the rests didn't. In comparison to this study the proportion of mothers who didn't receive ANC is higher in current study.

In a study conducted by Kibria *et al.*, (2017) revealed that 44.2% of the pregnant mothers who received delivery services from SBAs were found to receive at least 1 ANC from skilled providers. Whereas in our study two-third (63%) of the respondents received ANC (1-2) times and the rest (37%) received ANC (3-4) times.

Chowdhury (2021) revealed that 28% mothers received ANC from the Social Health Worker. In our study, the mothers received ANC from the Doctors and Nurses 40% and 21% respectively. The proportion of mothers received ANC from the Nurse/Midwife revealed highly dependency on the Nurse/Midwife for ANC in Bangladesh.

The majority (72.5%) of the respondents reported that they gave birth of children at hospital. The rests (27.5%) were found to give birth of children at home. In a study (Rana *et al.*, 2020) 60.2% of the mothers gave births at hospital and others had done it at home.

The lactating mothers (27.5%) who reported to give birth at home, almost (93%) of them delivery service received from Village Dai and others (7%) conducted their child delivery by Nurse/Midwife at home. Another study entitled "Factors affecting deliveries attended by skilled birth attendants in Bangladesh" conducted by Al Kibria *et al.* (2017)

found about 36% delivery conducted by SBA. This is the general scenario of Bangladesh Almost (92%) delivered their children through NVD and the rests only (8%) gave birth through CS Operation. A study entitled Evaluation of Knowledge, Attitudes, and Practices about Exclusive Breastfeeding among Women in Italy conducted by Cascone *et al.* (2019) revealed that (55.1%) vaginal delivery in hospital and the rests of the mothers gave births by CS operation.

### **Knowledge regarding breast feeding**

In current study Knowledge regarding breastfeeding was leveled into five categories. Highest proportion (45%) lactating mothers found to have "Good Knowledge" and (16%) had "Excellent Knowledge". The respondents with "Poor Knowledge" and "Very Good Knowledge" constituted equal proportion (14%) respectively. Least (11%) found with "Average Knowledge." In comparison the previous study conducted in Bilaspur of India found 95% mothers had Good Knowledge (Manwani *et al.*, 2029)

### **Attitude of lactating mothers regarding breastfeeding**

In the current study, the majority of lactating mothers (78%) exhibited a "Positive Attitude," while 22% showed a "Neutral Attitude." Notably, no "Negative Attitude" was observed among the participants. Compared to the findings of Manwani *et al.* (2019), where 87.3% of lactating mothers had a positive attitude toward breastfeeding, the current study shows a relatively lower percentage of positive attitudes.

### **Breastfeeding practice of mothers**

The highest proportion of respondents (45%) demonstrated a "Very Good Practice" in breastfeeding. A substantial proportion (28%) were found to have a "Good Practice," while 23% exhibited an "Excellent Practice." A small percentage (6%) were categorized as having a "Poor Practice." In comparison, a previous study conducted in rural India by Manwani *et al.* (2019) reported that 68% of respondents engaged in a "Good Practice" of breastfeeding. According to a review study by Sultana *et al.* (2015), "although Bangladesh is traditionally regarded as a country with widespread breastfeeding, the practice continues to be suboptimal, as observed in various studies."

## Conclusion

In conclusion, although the overall knowledge level of lactating mothers regarding breastfeeding was satisfactory, a significant portion of respondents exhibited “Poor,” “Average,” and “Good” levels of knowledge. The overall attitude of respondents towards breastfeeding was highly satisfactory, with nearly four-fifths demonstrating a “Positive Attitude,” a small proportion showing a “Neutral Attitude,” and none displaying a “Negative Attitude.”

The breastfeeding practices of lactating mothers were generally satisfactory, with most respondents demonstrating “Very Good” practices (scoring 21-30 out of 40). The second-largest group exhibited “Good” practices (scoring 11-20), while a notable number displayed “Excellent” practices. Only a few respondents fell into the “Average Practice” category (scoring 1-10).

The findings of this study, along with relevant insights, could be valuable for future research aimed at addressing knowledge gaps and improving attitudes and practices related to breastfeeding.

## Recommendations

**Enhance Educational Programs:** Despite the generally good knowledge levels, there is room for improvement, especially for those with poor or average knowledge. Tailored educational programs focusing on breastfeeding benefits and techniques should be implemented to elevate the knowledge of all lactating mothers.

**Sustain Positive Attitudes:** Given the high proportion of positive attitudes towards breastfeeding, it is crucial to sustain and further encourage this mindset through continuous community support programs, peer counseling, and positive reinforcement from healthcare providers.

**Support Breastfeeding Practices:** While the majority of mothers practice Good to Excellent breastfeeding techniques, targeted interventions should be designed to support those who exhibit poor practices. These interventions could include hands-on training, home visits by lactation consultants, and creating support groups.

## Addressing Barriers and Confounding

**Variables:** Future programs should consider potential barriers to effective breastfeeding practices such as maternal health conditions, infant feeding difficulties, and lack of family support. Addressing these barriers through comprehensive support systems will likely improve breastfeeding outcomes.

**Cultural Sensitivity:** Considering the cultural context is vital. Programs should be designed to respect and incorporate local socio-cultural norms and values, ensuring greater acceptance and effectiveness of breastfeeding promotion efforts.

## References

- Ajibade, B. L., Lawal, R. A., & Awodele, I. A. (2020). Factors influencing breastfeeding practices among mothers in rural and urban communities in South West Nigeria. *J. Public Health Res.*, 9(3), 293-299. <https://doi.org/10.4081/jphr.2020.1863>
- Alimoradi, F., Javadi, M., Barikani, A., Kalantari, N. & Ahmadi, M. (2014). An overview of importance of breastfeeding. *J Com Ped.*, 4(2). <https://doi.org/10.5812/jcp.14028>
- Al Kibria, G. M., Ghosh, S., Hossen, S., Alam Barsha, R. A. & Sharmeen, A. (2017). Factors affecting deliveries attended by skilled birth attendants in Bangladesh. Factors affecting deliveries attended by skilled birth attendants in Bangladesh, *Matern Health Neonatol Perinatol*, 3(7), 10-9.
- Alex (2017). Knowledge, Attitude and Practices of Exclusive Breastfeeding among Primiparous Lactating Mothers Attending Kyabugimbi Health Centre Iv, Bushenyi District, Western Uganda [Unpublished master's thesis]. International University.
- Biswas, M. L. (2010). Family Support on Exclusive Breastfeeding Practice Among Mothers in Bangladesh [Unpublished master's thesis]. Prince of Songkla University.
- Black, R. E., Victora, C. G., Walker, S. P., Bhutta, Z. A., Christian, P., De Onis, M., Ezzati, M., Grantham- McGregor, S., Katz, J., Martorell, R. & Uauy, R. (2013). Maternal and child undernutrition and overweight in low-income and middle-income countries. *Lancet*, 382(9890), 427-451.
- Brahm, P. & Valdésb, V. (2017). Benefits of breastfeeding and risks of not breastfeeding. *Sociedad Chilena de Pediatría*, 88(1), 15-21.
- Breastfeeding (2002). <https://en.wikipedia.org/wiki/Breastfeeding>
- Cascone, D., Tomassoni, D., Napolitano, F. & Di Giuseppe, G. (2019). Evaluation of knowledge,

- attitudes, and practices about exclusive breastfeeding among women in Italy. *Int. J. Environ. Res. Public Health*, 16(12), 2118, doi.org/10.3390/ijerph16122118
- Couto, G. R., Dias, V. & Jesus Oliveira, I. D. (2020). Benefits of Exclusive Breastfeeding: An integrative Review. *Nursing Practice Today*, 7(4), 245-254.
- Choudhary, B. (2021). KAP Study Regarding Breast Feeding Among Post-Natal Mothers: A Questionnaire Based Survey. *Int. J. Pharm. Clin.*, 13(3), 1-8.
- Emmanuel A. (2015). A Literature Review of the Factors That Influence Breastfeeding: An Application of the Health Belief Model. *Int. J. Nurs. Health Sci.* 2(3): 28-36
- Februhartanty, J., Bardosono, S., & Septiari, A. M. (2006). Problems during lactation are associated with exclusive breastfeeding in DKI Jakarta province: Father's potential roles in helping to manage these problems. *Malnourish J Nutr.*, 12, 167-180.
- Kramer, M. S. & Kakuma, R. (2002). The optimal duration of exclusive breastfeeding: A Systematic Review. WHO, Geneva, Switzerland. Retrieved May 28, 2010, from <http://www.who.int/nutrition/topics/infantfeeding>
- Karnawat. D., Karnawat B.S., Joshi, A., Kohli, G.K. (2015). Knowledge, attitude & practices about infant feeding among mothers of urban & rural areas of Ajmer district. *J Med Res.*, 1(3): 90-94
- Kumar, S., Jha, S.K., Singh, A., Rawat, C.M.S., Awasthi, S., Bano. M. & Surana. A. (2015). Knowledge, Attitude and Practices (KAP) Regarding Breastfeeding: A Community based Cross Sectional Study from Rural Utrakhand. *Healthline J.*, 2015; 6(2), 17-22
- Leung, A. K. C. & Sauve, R. S. (2005). Breast is best for babies. *J Nation Med Assoc.*, 97, 1010-1019.
- Lutter, C. K., Morrow, A. L. & Ruel, M. T. (2021). Breastfeeding practices in rural areas of developing countries: A review of the evidence. *Food Nutr Bull.* 42(1), 45-56.
- Manwani, V. K., Thakur, H. L. & Pandey, S. (2019). A Cross Sectional Study Of Knowledge, Attitude & Practices (Kap) Regarding Breast Feeding Among Lactating Mothers At Cims, Bilaspur (C.G.). *Int J Sci Res.*, 8(5), 31-33.
- Olatona, F. A., Aderibigbe, S. A. & Adeniyi, O. F. (2019). Breastfeeding practices and determinants among mothers of children aged 0-24 months in rural and urban communities of Lagos State, Nigeria. *Int Breastfeeding J.*, 14(1), 32. <https://doi.org/10.1186/s13006-019-0225-8>
- Quigley, M. A., Kelly, Y. J. & Sacker, A. (2007). Breastfeeding and hospitalization for diarrheal and respiratory infection in the United Kingdom millennium cohort study. *Pediatrics*, 119(4), e837-e842. <https://doi.org/10.1542/peds.2006-2256>
- Ramawat P., Prashant S, Malani S. (2018). KAP Study of Knowledge, Attitude and Practice of Mothers about Breast Feeding at Tertiary Care Centre of Central India. *Scholars J Appl Med Sci.*, 1656-59.
- Rana, M. M., Islam, M. R., Karim, M. R., Islam, M. Z., Haque, M. A., Shahiduzzaman, M. & Hossain, M. G. (2020). Knowledge and practices of exclusive breastfeeding among mothers in rural areas of Rajshahi district in Bangladesh: A community clinic based study. *Plos One*, 15(5), 1-11.
- Rahman, M. A., Khan, M. N., Akter, S., Rahman, A., Alam, M. M., Khan, M. A., & Rahman, M. M. (2020). Determinants of exclusive breastfeeding practice in Bangladesh: Evidence from nationally representative survey data. *Plos One*, 15(7), e0236080. <https://doi.org/10.1371/journal.pone.0236080>
- Sinusas, K. & Gagliardi, A. (2001). Initial management of breastfeeding. *American Family Physician*, 64, 981-988.
- Sultana, J., Hossain, M. R., Begum, N. N. & Nazme, N. I. (2019). Knowledge, attitude and practices of breastfeeding-an extensive review. *J Armed Forces Med Coll, Bangladesh*, 11(2), 76-83. <https://doi.org/10.3329/jafmc.v11i2.39827>
- Sudharto, P. (2008). Message, MCH Community Newsletter Breastfeeding. WHO Country Office for India.
- Susin, L. R. O., Giugliani, E. R. J. & Kummer, S. C. (2005). Influence of grandmothers on breastfeeding practices, Unpublished doctoral dissertation, Federal University: Brasil.
- Tanash, H. A. (2014). Breastfeeding knowledge, practice, attitudes, and influencing factors: Findings from a selected sample of breastfeeding mothers in Bemidji, Minnesota.
- Thomas, C. L. (1997). Taber's Cyclopedic Medical Dictionary (18th ed.), Philadelphia: United States of America.
- Verma, A., Kumari, R., Hussain, S., Langer, B., Gupta, R. & Singh, P. (2017). Knowledge and practices regarding breastfeeding: A community-based cross-sectional study in a rural area of northwest India. *Int J Med Sci Public Health*, 6(5).
- Victora, C. G., Bahl, R., Barros, A. J. D., França, G. V. A., Horton, S., Krasevec, J., Murch, S., Sankar, M. J., Walker, N. & Rollins, N. C. (2016). Breastfeeding in the 21st century: Epidemiology, mechanisms, and lifelong effect. *Lancet*, 387(10017), 475-490.
- World Health Organization. (2021). Breastfeeding. Retrieved from <https://www.who.int/health-topics/breastfeeding>
- WHO. (2021). Breastfeeding characteristics of Syrian refugees in Turkey. <https://apps.who.int/iris/bitstream/handle/10665/341820/WHO-EURO-2021-2545-42301-58509-eng.pdf>