

Original Article

Knowledge, Attitude, and Practices of Exclusive Breastfeeding among Lactating Mothers Attending a Tertiary Care Hospital in Dhaka, Bangladesh

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Abstract:

Background: Exclusive breastfeeding (EBF) for the first six months of life is a proven intervention for improving infant survival and maternal health. Despite global and national recommendations, EBF practice remains suboptimal in Bangladesh.

Objective: To assess the knowledge, attitudes, and practices related to exclusive breastfeeding among lactating mothers attending a tertiary care hospital in Dhaka.

Methods: A descriptive cross-sectional study was conducted from March to August 2025 among 413 lactating mothers with children aged 0–24 months attending Bangladesh Shishu Hospital and Institute. Data were collected using a structured Knowledge, Attitude, and Practice questionnaire based on FAO and WHO guidelines. Descriptive statistics were used for analysis.

Results: The mean age of mothers was 26.4 years. Although 92.5% of respondents reported receiving breastfeeding education during pregnancy, only 59.1% correctly understood the meaning of exclusive breastfeeding. About 68.8% knew that breast milk should be the first food for a newborn, and 58.6% recognized that breast milk alone provides sufficient nutrition for the first six months. Knowledge gaps were more pronounced among mothers with lower educational attainment. Only 35.4% practiced exclusive breastfeeding on demand. When facing breastfeeding difficulties, 59.6% sought professional healthcare support. Overall, 54.5% of mothers reported confidence in breastfeeding.

Conclusion: Despite generally positive awareness, significant gaps persist in knowledge and consistent practice of exclusive breastfeeding. Targeted education, strengthened counseling services, and effective use of mass media are essential to improve exclusive breastfeeding practices and maternal–child health outcomes.

Key words: Exclusive breastfeeding, Knowledge, Attitudes and practices, Lactating mothers.

Introduction:

Breastfeeding is universally acknowledged as the optimal method of infant feeding, fulfilling the nutritional, immunological, and psychological needs of newborns and infants. Exclusive breastfeeding (EBF) for the first six months of life provides substantial health benefits, including protection against gastrointestinal infections,

pneumonia, otitis media, and urinary tract infections in infants, while also contributing to improved maternal health through faster postpartum weight reduction and a decreased risk of type 2 diabetes and certain malignancies.^{1,2} Exclusive breastfeeding is defined as “An infant’s consumption of human milk with no supplementation of any type (no

water, no juice, no nonhuman milk, and no foods) except for vitamins, minerals, and medications until 06 months".³ The World Health Organization (WHO) further recommends initiation of breastfeeding within one hour of birth to ensure optimal neonatal outcomes.⁴

Despite well-established benefits, exclusive breastfeeding practices remain suboptimal, particularly in low- and middle-income countries. Cultural myths and misconceptions such as beliefs that colostrum is harmful or that breast milk is insufficient in the early postnatal period continue to influence feeding behaviors. Consequently, pre-lacteal feeds including honey, sugar water, plain water, or mustard oil are often introduced, undermining exclusive breastfeeding practices. Globally, it is estimated that appropriate breastfeeding could prevent approximately 823,000 deaths among children under five years of age annually,⁵ underscoring its role as one of the most cost-effective child survival interventions.⁶

Breastfeeding practices are influenced by a complex interplay of factors, including maternal education, cultural norms, socioeconomic status, family support, and access to health services.⁷ Inadequate infant feeding practices contribute significantly to malnutrition and poor health outcomes, posing challenges to social and economic development in both developed and developing nations. Although Bangladesh has made progress in promoting breastfeeding, exclusive breastfeeding rates remain below recommended levels.

Promoting early initiation and sustained exclusive breastfeeding is therefore a critical public health priority. Strengthening maternal education, addressing misconceptions, and providing practical breastfeeding support through healthcare systems are essential to improving exclusive breastfeeding practices and enhancing maternal and child health outcomes.^{8,9}

Methods:

This descriptive cross-sectional study was carried out on 413 mothers who were practicing breastfeeding, keeping 95% confidence interval, 5% significance level and 10% margin of error, using the WHO sample size calculation method. Non-probability, purposive sampling was done.

The study was conducted at the Bangladesh Shishu Hospital and Institute from 1st March 2025 to 31st August 2025.

Lactating mothers with children aged 0–24 months who attended the study healthcare facility and provided written informed consent were eligible for inclusion. Mothers were excluded if they declined to participate, were unable to provide information due to illness, had communication difficulties such as inability to speak or hear, or felt uncomfortable sharing information. Additionally, neonates admitted to the intensive care unit for any medical condition were excluded from the study.

Prior approval was obtained from the hospital's research and ethical review board before initiating the study. Mothers were interviewed using a structured questionnaire that assessed their knowledge, attitudes and practice regarding appropriate feeding quantity, benefits of breastfeeding, exclusive breastfeeding, and continuation of breastfeeding up to two years of age. Participants were clearly informed about the objectives and benefits of the study and were assured that the collected information would be used solely for research and publication purposes while maintaining confidentiality. Informed consent was obtained from all participants. The questionnaire was designed in accordance with the Food and Agriculture Organization of the United Nations (FAO), Rome 2014, guidelines for evaluating nutrition-related knowledge, attitudes, and practices.¹⁰

Results:

The mean age of the respondent mothers found 26.4 years (SD \pm 5.36), with an age range from 20 to 40 years. Maximum number of respondents are in the age group of 20-30 (292, 70.7%). The distribution of respondents across different age groups are presented in the following Table-I.

Table I: Age-group distribution of the mothers (n=413)

Age in Year	Frequency	Percentage
<20	31	7.5
20-30	297	71.9
>30	85	20.6
Total	413	100.0

The mean age of the children were 7.02 months (SD ± 6.16), with an age range from 0 to 24 months. Maximum number of children are below the age of 06 months (208, 50.4%) The distribution of respondents across different age groups are presented in the following Table-II.

Table-II: Distribution of Children by Age Group in Months (n = 413)

Children Age-group	Frequency	Percentage
<6	209	50.6
6-12	124	30.0
13-18	55	13.3
19-24	25	6.1
Total	413	100.0

The demographic characteristics revealed a diverse educational background (Table-III). Approximately half (48.7%) of the respondents (201 individuals) had education up to the primary level, while 80 respondents (19.4%) had education up to the HSC level. Additionally, 126 respondents (30.5%) held higher level of education, while 6 respondents (1.5%) were illiterate.

Table-III: Academic level of the participant mothers (n=413)

Valid	Frequency	Percentage
None	6	1.5
Primary	201	48.7
Secondary	80	19.4
Higher	126	30.5
Total	413	100.0

Out of the 413 respondent mothers, the majority were housewives (378, 91.5%), while only 35(8.5%) were engaged in different occupations. Regarding place of residence, 222 respondents (53.8%) lived in urban areas and 191(46.2%) resided in rural areas. The cross tabulation showed that most housewife mothers were found in both urban (200) and rural areas (178). A relatively higher proportion of working mothers resided in urban areas (22, 9.9%) compared to rural areas (13, 6.8%). Overall, respondents from urban settings were slightly more represented than those from rural areas (Fig-1). Out of 413 children 263(63.7%) were male and 150(36.3%) were female.

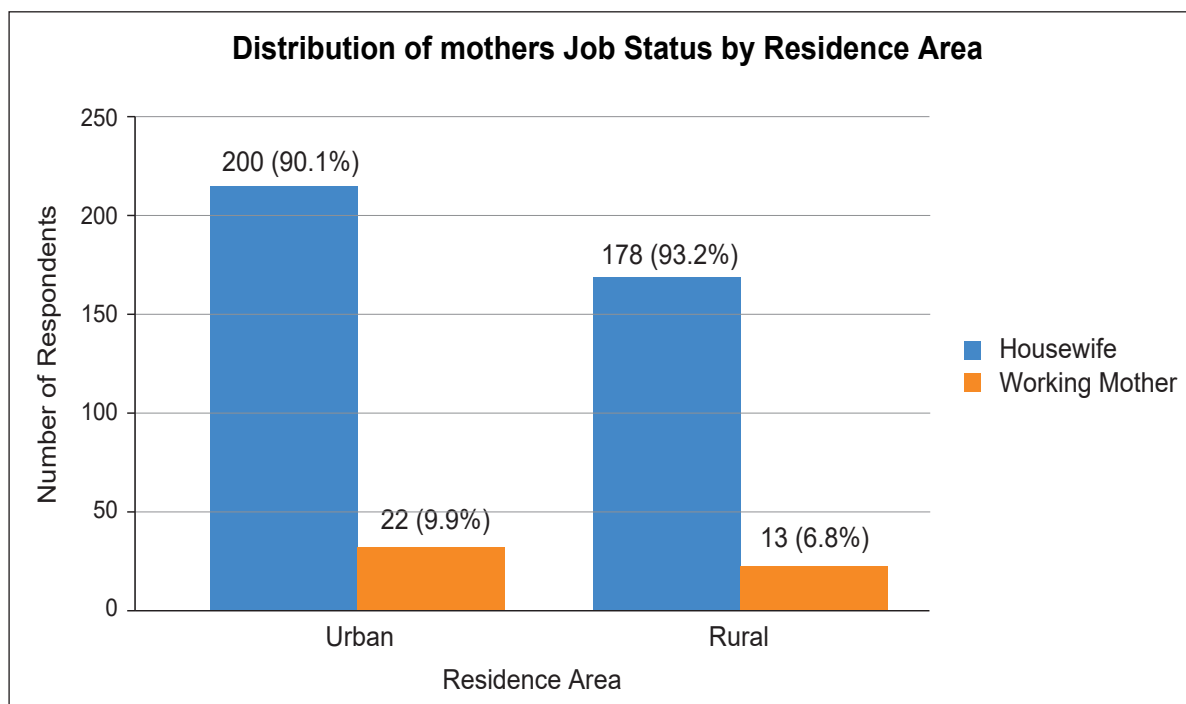


Fig-1: Distribution of respondent mothers job and residence location (n=413)

Table-IV: Distribution of mothers by academic qualification and breast-feeding knowledge during pregnancy (n=413)

Academic qualification of mother	Breast feeding knowledge during pregnancy		Total
	Yes	No	
None	3	3	6
Primary	173	28	201
Secondary	80	0	80
Higher	126	0	126
Total	382	31	413

Among all the 413 respondent mothers of different academic background (Table-IV) 382(92.49%) mothers had breast feeding education and 3(0.73%) mothers of illiterate education back ground and 28(6.78%) mothers of primary education background did not had breast feeding education. This data showed that breastfeeding education has direct relationship with educational background.

Regarding perception about first food a new born should receive 284(68.8%) mothers knew that breast milk should be the first food a new born should receive. Rest 129(31.2%) mothers did not know or had no idea about the first food for the baby (Table-V).

Table-V: Perception of mothers about first food a new born should receive (n=413)

Perception of mothers	Frequency	Percentage
Only breast milk	284	68.8
Others	31	7.5
Don't know	98	23.7
Total	413	100.0

Mother's perception about why breast milk alone is sufficient in first 06 months of life, 242(58.6%) respondents express that breast milk provides all nutrients and liquids in the first 06 months of the babies, 41(9.9%) respondents express that baby cannot digest other food before 06 months. Rest 130(31.5%) don't know or had other ideas about why breast milk alone is sufficient for the first 06 months of life (Table-VI).

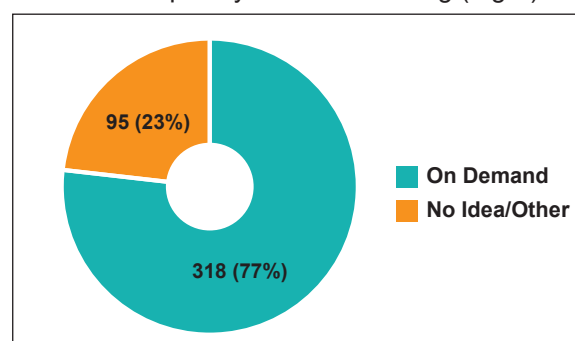
Table-VI: Mother's perception about why breast milk alone is sufficient in first 06 months of life (n=413)

Mother's perception	Frequency	Percentage
Provide all nutrients and liquids	242	58.6
Baby can't digest other food before 06 months	41	9.9
Other	19	4.6
Don't know	111	26.9
Total	413	100.0

Table-VII: Mother's idea about meaning of exclusive breastfeeding (n=413)

	Frequency	Percentage
Knows	244	59.1
Does not know	169	40.9
Total	413	100.0

Participant 244(59.1%) mothers knew the meaning of exclusive breast feeding, rest 169(40.9%) gave negative answer (Table-VII). Regarding frequency of feeding 318(77%) respondent mothers knew that the feeding frequency of baby is on demand and rest 95(23%) mothers had no idea or other ideas about the frequency of breast feeding (Fig-2).

**Fig-2: Respondent mothers perception about feeding frequency of baby (n=413)**

Knowledge of mothers about the benefit of exclusive breastfeeding (EBF) during first 06 months of baby 245 (59.3%) respondents expressed that baby grows healthy, protection from diarrhoea and other infectious diseases

63(15.3%), protection from obesity 27(6.5%), protection from other diseases 27(6.5%). Rest 51(12.3%) have no idea about the benefit of exclusive breast feeding on the first 06 months of life (Fig-3).

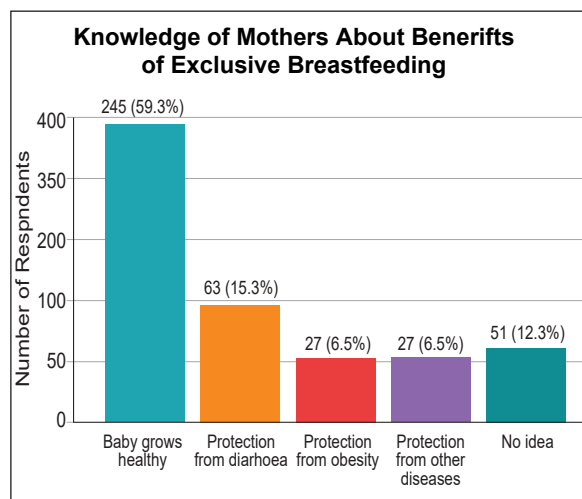


Fig-3: Distribution of knowledge of mothers about the benefit of EBF during first 06 months of baby (n=413)

Table-VIII showed the relation between academic qualification of mother and benefits of exclusive breastfeeding for the first 06 months of the babies. Among 201 mothers with primary education 30(7.26%) did not have any idea about the benefit of exclusive breastfeeding in first 06 months. On the other hand, out of 126 mothers with higher education only 9(2.18%) mothers did not know the benefit of exclusive breast feeding among the babies. Ignorance about exclusive breast feeding is more among less educated mothers.

Table-IX showed the relationship between academic qualification of mother and benefits of exclusive breastfeeding for mothers. Perception about the benefit of exclusive breastfeeding for mothers, 253(61.3%) respondents expressed that delays fertility, lose weight which gained during pregnancy 53(12.8%), lower risk of breast and ovarian cancer 36(8.7%), lower risk of post-partum haemorrhage 8(1.9%), improve relationship between mother and baby 6(1.5%). Among 201 mothers with primary education 27(6.54%) did

Table-VIII: Distribution by academic qualification of mother and benefit of EBF during first 06 months of babies (n=413)

Academic qualification of mother	Perception on Benefit of EBF during first 06 months						Total
	Baby grows healthy	Protection from diarrhoea & other infections	Protection against obesity & chronic disease	Protection against other diseases	Other	Don't know	
None	3	1	0	2	0	0	6
Primary	120	26	12	6	7	30	201
Secondary	43	19	5	0	1	12	80
Higher	79	17	10	4	7	9	126
Total	245	63	27	12	15	51	413

Table-IX: Distribution by academic qualification of mothers and benefit of EBF for mothers (n=413)

Academic qualification of mother	Benefit of EBF for mothers							Total
	Delays fertility	Lose weight which gained during pregnancy	Lower risk of breast and ovarian cancer	Lower risk of post-partum haemorrhage	Improve relationship between mother and baby	Other	Don't know	
None	2	0	2	1	0	0	1	6
Primary	130	19	15	3	2	5	27	201
Secondary	48	16	2	3	0	0	11	80
Higher	73	18	17	1	4	2	11	126
Total	253	53	36	8	6	7	50	413

Table-X: Distribution by academic qualification of mother & seeking professional help from healthcare workers if breastfeeding difficulties arises (n=413)

Academic qualification of mother	Seeking professional help from healthcare workers if breast-feeding difficulties arises			Total
	Seeking professional	Other	Don't know	
None	4	0	2	6
Primary	117	14	70	201
Secondary	51	3	26	80
Higher	74	11	41	126
Total	246	28	139	413

not have any idea about the benefit of exclusive breastfeeding for mothers. On the other hand, out of 126 mothers with higher education only 11(2.66%) mothers did not know the benefit of exclusive breast feeding for mothers. Ignorance about benefit of exclusive breast feeding is more among less educated mothers.

While practicing exclusive breast feeding 146(35.4%) mothers breast feed exclusively on demand, 122(29.5%) manually expressing breast milk, 71(17.2%) having a good nutrition and healthy diet, 20(4.8%) drink enough liquids during the day, 54(13.1%) practice other methods or don't know any method (Fig-4).

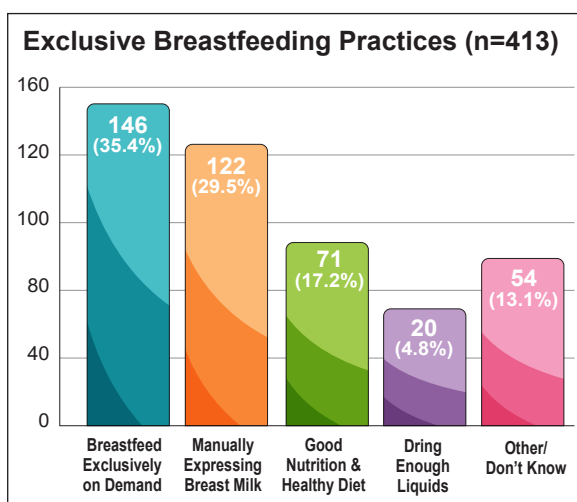
**Fig-4: Different ways the participant mothers keep up their breast milk supply**

Table-X showed the distribution by academic qualification of mother & seeking professional help from healthcare workers if breast feeding difficulties arises. While facing difficulties regarding breast feeding 246(59.6%) mothers

seeking professional help from healthcare workers. Rest 167(40.5%) do other means or don't seek for professional help. Mothers who are illiterate or have only primary level education are total 207(50.12%) and out of them 72(17.43%) did not seek professional help from any health care workers. On the other hand, mothers with secondary and higher-level education are total 206(49.88%) and out of them 67(16.22%) did not seek professional help from health care workers regarding breast feeding difficulties.

Respondent 225(54.5%) mothers felt confident while breastfeeding their children, 188(45.5%) mothers did not feel confident breastfeeding their children (Table-XI).

Table-XI: Respondent mothers confidence while breastfeeding their children (n=413)

Confidence of mother	Frequency	Percentage
Not confident	188	45.5
Confident	225	54.5
Total	413	100.0

Discussion:

Exclusive breastfeeding (EBF) for the first six months of life plays a pivotal role in ensuring optimal infant survival, physical growth, and neurocognitive development. The present study offers important insights into the knowledge, attitudes, and practices related to exclusive breastfeeding among lactating mothers attending a tertiary care hospital in Dhaka. Overall, the findings reveal a notable discrepancy between maternal awareness and actual breastfeeding practices, a trend that has been consistently reported in previous national and regional studies conducted in Bangladesh.

In this study, the mean age of respondent mothers was 26.4 years ($SD\pm 5.36$), ranging from 20 to 40 years (Table-I), while the mean age of the children was 7.02 months ($SD\pm 6.16$), with an age range of 0 to 24 months (Table-II). More than half of the mothers (209, 50.6%) were either illiterate or had only completed primary education (Table-III). The majority of respondents were housewives (378, 91.5%), with only 35 (8.5%) engaged in other occupations. Slightly more than half of the participants resided in urban areas (53.8%), while 46.2% lived in rural settings (Fig-1). These sociodemographic characteristics are consistent with findings from similar studies in Bangladesh, where maternal education and occupation have been shown to influence breastfeeding behavior. A large proportion of mothers (382, 92.49%) reported receiving breastfeeding-related education during pregnancy (Table-IV). Regarding maternal perceptions, 68.8% of respondents correctly identified breast milk as the first food for a newborn (Table-V), and an equal proportion recognized that breast milk alone is sufficient for the first six months of life (Table-VI). However, only 59.1% of mothers accurately understood the definition of exclusive breastfeeding (EBF) (Table-VII). This discrepancy indicates that although exposure to breastfeeding education is high, comprehension of key concepts remains inadequate, particularly among mothers with lower educational attainment. Similar associations between maternal education and breastfeeding knowledge have been reported in earlier studies from Bangladesh, emphasizing education as a crucial determinant of appropriate breastfeeding practices.

With respect to feeding frequency, 77% of mothers correctly stated that breastfeeding should be provided on demand, while the remaining 23% either lacked knowledge or held misconceptions regarding feeding frequency (Fig-2). Knowledge about the benefits of EBF during the first six months was reported by 362 (87.65%) mothers, who acknowledged its role in promoting healthy growth and protecting against diarrhoea, infectious diseases, obesity, and other illnesses. However, 51 (12.3%) mothers were unaware of these benefits (Fig-3). Lack of knowledge regarding EBF was more pronounced among mothers with lower

educational levels (Table-VIII), suggesting the persistence of misconceptions despite ongoing health education efforts. Although awareness appears higher than in earlier national reports, these findings underscore the need for more targeted and comprehensible counseling strategies.

In terms of maternal benefits, 86.2% of respondents recognized that EBF delays fertility, aids postpartum weight loss, reduces the risk of breast and ovarian cancer, lowers the likelihood of postpartum haemorrhage, and strengthens the mother-child bond (Table-IX). This relatively high level of awareness may reflect improved access to health information in a tertiary care setting. Nevertheless, practical breastfeeding behaviors remained suboptimal. Only 35.4% of mothers practiced EBF on demand, while others relied on manual expression, dietary adjustments, or expressed uncertainty regarding appropriate techniques (Fig-4). These findings suggest that inadequate breastfeeding practice is more closely related to insufficient skills and confidence rather than a lack of awareness alone.

Encouragingly, when breastfeeding difficulties were encountered, 59.6% (246) of mothers sought professional support from healthcare workers (Table-X). Mothers from different educational backgrounds were similarly likely to seek assistance, indicating that accessible healthcare services may help reduce disparities related to educational status. Additionally, more than half of the mothers (54.5%) reported feeling confident about breastfeeding (Table-XI), highlighting the positive role of healthcare guidance.

Overall, although maternal knowledge and attitudes toward EBF were generally favorable, consistent and sustained practice remained insufficient. Educational status significantly influenced maternal knowledge; however, effective healthcare support and skill-based counseling played a vital role in bridging the gap between awareness and practice.

These findings are consistent with a nationwide survey in Bangladesh titled "Surveillance on Breastfeeding and Weaning Situation and Child and Maternal Health in Bangladesh",¹¹ which reported that only 16% of mothers practiced exclusive breastfeeding for the recommended six months, despite high levels of awareness and

positive attitudes.¹² Furthermore, although 94% of mothers were aware of the recommended duration of EBF, only 51.1% adhered to this guideline, with early introduction of formula milk and bottle feeding remaining prevalent.¹³ The present study similarly demonstrates that while maternal knowledge regarding breastfeeding is relatively satisfactory, the practice of sustained EBF remains limited.

Conclusion:

The assessment of EBF knowledge, attitude and practices among lactating mothers appearing a tertiary care hospital highlights important factors influencing adherence to recommended breastfeeding guidelines. It is found in the present study that many mothers lack sufficient knowledge about EBF practices. Therefore, it is recommended that media be utilized as a tool to educate women on the benefits of EBF.

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