



Research article

Knowledge, attitudes, and predictors of exclusive breastfeeding practice among lactating mothers in Noakhali, Bangladesh

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ABSTRACT

Background: Mothers' knowledge, attitudes, and practices toward exclusive breastfeeding are crucial to both child and mother's health and wellbeing. Hence, This study aimed to assess knowledge, attitudes, and practices of exclusive breastfeeding among lactating mothers as well as the predictors of their exclusive breastfeeding practice.

Methodology: This cross-sectional study included 397 mothers having infants aged 0–6 months who sought care at Noakhali Sadar Upazila, Noakhali, Bangladesh. A field-tested and validated Food and Agriculture Organization of the United Nations (FAO) questionnaire was utilized to collect information from participants.

Results: Of those evaluated; 29.0% of mothers could not define exclusive breastfeeding accurately, 11.3% and 59.3% did not know the benefits of exclusive breastfeeding for babies and mothers, respectively. More than half (51.4%) of the mothers reported feeling good about exclusive breastfeeding for six months, did not find difficulties to breastfeed exclusively for six months (39.5%) and on-demand (58.2%). The mothers had an overall favorable attitude towards exclusive breastfeeding; however, 38.3% of mothers did not exclusively breastfeed their children. Literate mothers tended to exclusively breastfeed more (AOR: 3.06, 95% CI: 1.01–9.32; $P = 0.049$) than illiterate mothers. Mothers having one baby were more likely to breastfeed exclusively (AOR: 3.07, 95% CI: 1.21–7.78; $P = 0.018$) than mothers having more than one baby. Moreover, mothers with higher knowledge and favorable attitude had more than two times (AOR: 2.58, 95% CI: 1.315.07; $P = 0.006$) and forty-three times (AOR: 43.18, 95% CI: 21.513–86.66; $P < 0.001$) the higher tendency of exclusive breastfeeding compared to others.

Conclusion: Despite having satisfactory knowledge and attitude, the practice of exclusive breastfeeding among mothers was poor. We recommend that interventions must be focused more on ensuring exclusive breastfeeding practice among mothers in addition to improving their knowledge and attitudes.

1. Introduction

Exclusive breastfeeding (EBF) refers to providing the new-born infant no liquid (not even water) or solid foods except breastmilk. The WHO and other health authorities recommend EBF for at least six months [1]. Increasing the promotion of EBF is one of the most efficient approaches to reduce infant morbidity and mortality globally [2]. It is estimated that adequate EBF coverage can prevent 13–15% under-five mortality particularly in low- and middle-income countries [3]. Worldwide, the prevalence of new-born receiving breastmilk within 1 h after birth is only 44% while EBF for six months is practiced among 40% of the infants [4].

In Bangladesh, EBF practice increased from 55% in 2014 to 65% in 2017–18 [5].

Breastmilk is usually the first source of nutrition for a new-born. It serves as an essential factor for the proper growth and development during the first six months of infants' life and helps infants to adapt to their extra-uterine environment [6]. The nutrients present in the breastmilk are adequately balanced, readily bioavailable, and rapidly digestible [7]. Breastmilk prevents the occurrence of stomach upset, diarrhea, or constipation in infants [8]. Breastfeeding offers an impressive list of benefits for the health and wellbeing of both child and mother. It reduces the risk of several childhood infections i.e. including middle ear infections, respiratory tract infections, etc., and diseases such as

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diabetes, cancer, and sudden infant death syndrome [9, 10, 11]. It also contributes better cognitive and motor development [12] and breastfed children were observed to show a higher intelligence quotient (IQ) [8]. Breastfeeding assists mothers in minimizing the risk of breast and ovarian cancer, developing type 2 diabetes, proper weight recovery, and lactational amenorrhea or natural birth control [8, 13, 14]. To get the maximum benefits, breastfeeding should be introduced to infants within 1 h after birth and continued exclusively for the first six months of the infant's life. Continued breastfeeding is then suggested for at least one year, as different foods are introduced into the baby's diet [13]. Bangladesh government and several NGOs arrange many programs to promote and ameliorate the infant and young child feeding practices to address malnutrition among under-five children [15]. During early pregnancy or before pregnancy, many women decide to breastfeed their children. However, the rate of stopping breastfeeding increases if women have ambivalence about breastfeeding [16].

Knowledge, attitudes, and practices of breastfeeding have been assessed in many previous studies. In Nigeria, many studies analyzed the knowledge, practices, and techniques of breastfeeding, especially EBF [17, 18, 19, 20]. Some studies in Ethiopia determined the knowledge, practices about EBF among mothers and its related factors [21, 22, 23]. In Ghana, several studies identifies the knowledge, attitude, and determinants of EBF practice among rural lactating mothers [24, 25, 26]. However, there are limited numbers of studies that estimated the level of knowledge, attitudes, and practices of EBF among mothers in Bangladesh. Local and regional factors must be identified to implement government strategies and interventions targeting to boost the trend of EBF practicing among mothers with 0–6 months infants. Hence, the present study aimed to evaluate knowledge, attitudes, and practices of EBF as well as the demographic factors associated with the practice of EBF among lactating mothers in the Noakhali district.

2. Methods

2.1. Study design

This study was a cross-sectional survey carried out from November 2018 to June 2019 at Noakhali General Hospital, Sadar Upazila, Noakhali, Bangladesh.

2.2. Settings

Noakhali Sadar is one of the biggest Upazilas in the Noakhali district with a total population of 534,449 distributed over 336.21 square kilometers [27]. Noakhali General Hospital is chosen purposively as it is the only public hospital in Sadar Upazila and people with various demographic and socio-economic backgrounds from this Upazila seek health care services there. Additionally, the hospital has a woman and baby-friendly environment with a breastfeeding corner where mothers can breastfeed their babies with comfort. Furthermore, the hospital supports and encourages mothers to breastfeed their babies and has policy to compulsory breastfeed their baby in the hospital.

2.3. Subjects

Mothers and infants attending at the outpatient department of Noakhali General Hospital, Sadar Upazila, Noakhali, Bangladesh.

2.4. Sample size determination

Cochran's formula [28] was used for sample size calculation.

$$\text{Sample size, } n = Z^2pq/e^2$$

Where Z: standard normal variate (1.96 at 5% type I error)

p: the estimated proportion of the population (i.e. prevalence of EBF is 55% in Bangladesh as per BDHS 2014 [29])

q: 1 – p

e: the desired level of precision (5%)

Hence, the required sample size is 380. We enrolled 397 subjects for the present study utilizing a convenience sampling technique.

2.5. Ethical approval

The Human Research Ethics Committee of Noakhali Science and Technology University provided ethical approval, and informed consent (oral and written) was taken from participants before the study.

2.6. Inclusion and exclusion criteria

We included mothers if they (a) had infants aged six months or below, (b) were mentally competent and able to communicate verbally, (c) were able to provide informed consent, and (d) were willing to participate voluntarily. Mothers having infants with any acute or chronic illness, and with HIV/AIDS positive were excluded.

2.7. Data collection tools and procedures

We used a field-tested and validated questionnaire of Food and Agriculture Organization of the United Nations (FAO) [30] for evaluating the nutrition-related knowledge, attitudes, and practices were used to collect the necessary information. This manual serves as a reference guideline and contains practical tools for conducting high quality evaluation of nutrition and health related knowledge, attitudes and practices at the community level [30]. A locally adapted and Bengali translated version of the questionnaire was used in the present study. The questionnaire contained both closed and open ended questions. The questionnaire was first pre-tested among 20 mothers for comprehension, readability, and easiness of administration and finally employed for data collection purposes.

The first section included information on socio-demographic factors such as mother's age, residence, marital status, educational and occupational status, height and weight, parity, and infant's age. The body mass index (BMI) of the mothers was calculated as weight (kg)/height² (m²).

The knowledge section evaluated the mother's perception and intellectual ability regarding EBF. Ten questions like meaning and recommended length of EBF, frequency of breastfeeding, benefits of EBF for babies and mothers, ways to maintain breastfeeding supply, and overcoming barriers to EBF were included in determining the knowledge level. One mark point was provided for each correct answer while no points for the wrong answer resulting in a maximum score of 10. Each mother was given a knowledge score according to the total number of correct responses. The reliability of the knowledge scale was verified using Cronbach's coefficient alpha ($\alpha = 0.727$).

The third section assessed the mother's overall attitudes toward EBF. A total of six questions were included, such as mother's perceived benefits and barriers to EBF for six months, breastfeeding on demand, self-confidence during breastfeeding, and while expressing and storing breast-milk. There were three response options, identifying a favorable, neutral, or unfavorable attitude and mothers were asked to provide answers among one of the three options. Answers containing favorable response was given three points, neutral with two points and unfavorable with one point. Hence, the maximum achievable score was 18. Cronbach's coefficient alpha ($\alpha = 0.715$) was used to assess the reliability of the attitude scale.

The practice section included four items such as a remembrance of EBF in the past 24-hours, the different ways breastfed, who and how fed the baby, and the kind of food given to the baby in the last 24-hours (i.e. plain water, infant formula, tinned, powdered or fresh animal milk, juice/juice drinks, clear broth, yogurt, thin porridge, any other liquids). Mother's responses were recorded and further analyzed to identify their practice of EBF.

2.8. Data collection

Mothers and infants seeking care at Noakhali General Hospital were approached by the authors, assisted by some Master of Science (MS) students. The study aims and objectives, along with the benefits and risks of participating in the study, were properly explained to the mothers to facilitate their active participation and cooperation. Information was collected from mothers who agreed and consented to participate in the study through a face-to-face interview session, and the data collection procedures took around 20 min to complete.

2.9. Data analysis

Data analysis was performed using SPSS software (v26.0) for Windows (SPSS Inc., Chicago, IL, USA). Socio-demographic, knowledge, attitudes, and determinants of EBF practice data were presented by frequency, percentages, mean and standard deviation (SD) where necessary. The overall knowledge and attitude scores were converted to 100%, and knowledge and attitude scores above 70% were considered high knowledge and favorable attitudes, respectively [30].

To assess the univariate associations, cross-tabulation and chi-square tests were applied. A multivariate logistic regression model was developed from the significant variables in the univariate test and the independent predictors of EBF practice among mothers were identified. In all analyses, a P-value less than 0.05 was considered statistically significant.

3. Results

3.1. Socio-demographic profile

The socio-demographic characteristics of the lactating mothers are summarized in Table 1. The study included 397 lactating mothers, most (74.3%) (n = 295) were between 20-29 years of age, and about half (n = 200) of them were urban dwellers. All (n = 397) of the women were married. The majority (69.0%) (n = 274) of the mothers had some college and higher education, and around one-fourth (n = 110) were employed. The mean (\pm SD) BMI of the mothers was 23.6 (\pm 3.3) kg/m² and most (63.5%) (n = 252) of them belonged to normal nutritional status (BMI 18.5–24.9 kg/m²). About two-thirds (n = 262) of the mothers had 2-3 children, and the majority (59.9%) (n = 238) of the children were between 4-6 months.

3.2. Mothers' knowledge regarding EBF

Table 2 shows the mother's knowledge regarding EBF. About four in five (n = 321) mothers knew that breastmilk is the first food for the newborn. Less than one-third (n = 115) of the mothers could not accurately define EBF whereas the majority stated that babies should only receive breastmilk till six months (74.1%) (n = 292) and breastmilk is only sufficient for up to six months (69.0%) (n = 274). Most (83.4%) (n = 331) of the mothers answered that babies older than six months should receive breastmilk on demand. The benefits of EBF for babies and mothers could not be explained by one-tenth (n = 45) and three-fifth (n = 237) of mothers. About 77.6% (n = 308) of mothers had knowledge of maintaining the supply of breastmilk, while only 23.4% (n = 93) knew how to manage EBF in the absence of the mothers. More than four-fifth (n = 336) of the mother sought help from health professionals in case of breastfeeding difficulties. The mean \pm SD knowledge score of mothers was 69.3 \pm 22.4, and more than half (51.6%) (n = 205) of the mothers had high knowledge regarding EBF.

3.3. Mothers' attitude

Attitudes toward EBF among mothers are shown in Table 3. About 51.4% (n = 204) of mothers felt good, and 39.5% (n = 157) did not face difficulty while breastfeeding the child up to six months. About two-fifth (n = 159) of the mothers felt good, and three-fifth (n = 231) did not felt

Table 1. Socio-demographic and related characteristics of lactating mothers.

Characteristics	n (%)
<i>Mother's age (years)</i>	
<20	27 (6.8)
20–29	295 (74.3)
≥30	75 (18.9)
<i>Residence</i>	
Rural	197 (49.6)
Urban	200 (50.4)
<i>Marital status</i>	
Married	397 (100.0)
<i>Educational status</i>	
No formal schooling	46 (11.6)
Primary school completed	31 (7.8)
Secondary school completed	46 (11.6)
Some college and above	274 (69.0)
<i>Employment status</i>	
Unemployed	287 (72.3)
Employed	110 (27.7)
<i>BMI (kg/m²)</i>	
<18.5	18 (4.5)
18.5–24.9	252 (63.5)
25.0–29.9	114 (28.7)
≥30	13 (3.3)
<i>Parity</i>	
1	129 (32.5)
2–3	262 (66.0)
4–5	6 (1.5)
<i>Child's age (months)</i>	
<1	11 (2.8)
1–3	148 (37.3)
4–6	238 (59.9)

BMI: Body mass index.

difficulty in breastfed the babies on demand. Only 19.9% (n = 79) mentioned that they felt confident during breastfeeding, while 41.3% (n = 164) felt confident in expressing and storing breastmilk when the mother was not available. The overall attitude score of the mothers was 74.4 \pm 15.6, and a favorable attitude towards EBF was observed among 62.2% (n = 247) of the mothers.

3.4. EBF practice

Responses regarding EBF practice among mothers' are presented in Table 4. About 14.1% (n = 56) of the mothers did not breastfeed the baby while only few (19.4%) (n = 77) fed breastmilk by spoon, cup or bottle or breastfed by another woman during the past day or night. When the mother was absent or unable to feed the baby, father/grandmother fed breastmilk to the baby in most (n = 345) of the households, and feeding breastmilk by spoon, cup or bottle was mostly (n = 278) reported. Majority of the mothers did not feed the baby any liquids including plain water (n = 265), infant formula (n = 279), tinned, powdered or fresh animal milk (n = 324), juice/juice drinks (n = 356), clear broth (n = 368), yogurt (n = 386), thin porridge (n = 387), or any other liquids (n = 382) yesterday during the day or at night. Based on the responses, about 38.3% (n = 152) of the mothers did not exclusively breastfeed their children.

Table 5 represents bivariate analysis of the factors affecting EBF practice among mothers'. It was noted that mother's residence, education, occupation, number of children, and their knowledge and attitude about EBF had a significant (P < 0.05) effect on EBF practice among

Table 2. Mothers' knowledge of exclusive breastfeeding.

Variable	Know (%)	Don't know (%)
Breastmilk is the only first food for the newborn	321 (80.9)	76 (19.1)
Exclusive breastfeeding means giving an infant no liquid or solid foods except breastmilk for the first six months	282 (71.0)	115 (29.0)
Babies should receive only breastmilk from birth to six months of their life	292 (74.1)	103 (25.9)
Breastmilk is recommended from birth to six months	274 (69.0)	123 (31.0)
A baby younger than six months should receive breastmilk on demand	331 (83.4)	66 (16.6)
Has knowledge of the benefits of exclusive breastfeeding for babies	352 (88.7)	45 (11.3)
Has knowledge of the benefits of exclusive breastfeeding for mothers	160 (40.3)	237 (59.7)
Has knowledge of maintaining breastmilk supply	308 (77.6)	89 (22.4)
In absence, babies can continue to be exclusively breastfed by expressing breastmilk, storing, and asking someone to give to the baby	93 (23.4)	304 (76.6)
Seeking help from health personnel in overcoming breastfeeding difficulties	336 (84.6)	61 (15.4)

mothers. The percentage of EBF practice was higher among rural people. Literate mothers had a higher tendency of EBF practicing. Employed mothers were less likely to EBF their children. EBF practice was higher among mothers having one child. Mothers having a higher knowledge and a favorable attitude towards EBF breastfed exclusively more than their counterparts.

3.5. Predictors of EBF practice

The independent predictors of EBF practice among mothers were identified from the multivariate logistic regression model (Table 6). Literate mothers practiced EBF three times more ($P = 0.049$) than illiterate mothers. Mothers having one children were more likely to breastfeed exclusively (AOR: 3.07, 95% CI: 1.21–7.78; $P = 0.018$). Mothers with higher knowledge and favorable attitude had more than two times (AOR: 2.58, 95% CI: 1.31–5.07; $P = 0.006$) and 43 times (AOR: 43.18, 95% CI: 21.513–86.66; $P < 0.001$) the higher tendency of EBF practice compared to others.

4. Discussion

The current study determined the knowledge, attitudes, and practices of EBF among rural and urban lactating mothers having 0–6 months infants of Noakhali Sadar Upazila, highlighting the determinants of their EBF practices. Mothers' level of knowledge about EBF was high and their overall attitudes regarding EBF were favorable. However, level of practicing EBF was below expectation as per WHO recommendations. The independent predictors of EBF practice included maternal educational level, parity, having high knowledge, and favorable attitudes toward EBF.

Inadequate knowledge about EBF, its duration, and perceived benefits may hinder mothers from giving breastmilk exclusively to infants for six months. Most of the mothers in the present study possessed high knowledge regarding EBF although some gaps were noticed. Such a level of knowledge has also been recorded in earlier studies [2, 24, 25, 31, 32, 33, 34, 35, 36, 37]. The government is arranging counseling sessions and implementing interventions that help address the gap in knowledge about EBF. However, more programs and strategies should be designed by policymakers and health professionals so that all people including

lactating mothers become aware of EBF and its maternal benefits. Moreover, mothers and caregivers should be educated about breastmilk substitutes and the dangers of bottle-feeding that it is unsafe for babies and can cause infant illness and diseases.

The present study revealed an overall favorable attitude of mothers towards EBF. It is comparable to those of other studies [24, 32, 33, 34, 35, 36, 37]. However, many mothers reported not feeling confident while breastfeeding and expressing and storing breastmilk during her absence. It is particularly challenging for working mothers who cannot present at home always to breastfeed the baby exclusively. Hence, interventions targeting to raise mothers' confidence should be implemented more and remove their misunderstandings concerning expressing and storing breastmilk.

About 61.7% of the mothers reported practicing EBF. This finding supports the nationally repetitive data on EBF practice [5] and other studies [38] in Bangladesh. Many previous studies conducted in other countries reported a similar level of EBF practice [24, 39]. However, several reports in Bangladesh [8, 40] and other countries [2, 25, 31, 32, 33, 35, 36] documented different results. The current prevalence of EBF practice is much less than WHO targeted coverage of 90% [41] showing the difference between expected and actual scenarios. This low coverage of EBF practice might be due to several factors such as easy availability and pervasive promotion of breastmilk substitutes, misconceptions (both social and cultural) relating to breastfeeding, difficulties faced by women to balance work with childcare, and inadequate support from families and society for breastfeeding [42]. The present findings call for an immediate action to evaluate the contents for educating mothers as well as family members to better understand the benefits of breastfeeding and support mothers to breastfed infants exclusively for six months.

Our analysis found that literate mothers tended to practice EBF more than illiterate mothers. Several studies have identified mothers' level of education as a crucial factor influencing infant feeding practices [2, 24, 43]. The fact that literate mothers understand and acknowledge the benefits of EBF, and are inspired to practice it. So, the governments and NGOs should promote literacy to illiterate mothers as a comprehensive solution to insure EBF practice. EBF promotion programs tailored to the mothers need who have the low educational background can be effective as well.

Another important determinant of EBF practice was the number of children. Mothers having more than one child practicing EBF less than

Table 3. Mothers' attitudes towards exclusive breastfeeding.

Variable	Yes (%)	Not sure (%)	No (%)
Feeling good to breastfeed the baby exclusively for six months	204 (51.4)	145 (36.5)	48 (12.1)
Finding it difficult to breastfeed the baby exclusively for six months	94 (23.7)	146 (36.8)	157 (39.5)
Feeling good to breastfeed the baby on demand	159 (40.1)	206 (51.8)	32 (8.1)
Finding it difficult breastfeeding my baby on demand	89 (22.4)	77 (19.4)	231 (58.2)
Feeling confident while breastfeeding the child	79 (19.9)	266 (67.0)	52 (13.1)
Feeling confident in expressing and storing breastmilk while the mother is not available	164 (41.3)	105 (26.5)	128 (32.2)

Table 4. Exclusive breastfeeding practice among mothers.

Variable	Yes (%)	No (%)
Breastfeeding the baby yesterday during the day or at night	341 (85.9)	56 (14.1)
Feeding breastmilk to baby by spoon, cup or bottle, or breastfeeding by another woman yesterday during the day or night	77 (19.4)	320 (80.6)
Father/grandmother feeding breastmilk when the mother is absent or cannot feed the baby	345 (86.9)	52 (13.1)
Feeding breastmilk by spoon, cup or bottle when the mother is absent	278 (70.0)	119 (30.0)
Feeding plain water to the baby yesterday during the day or at night	132 (33.2)	265 (66.8)
Feeding infant formula to the baby yesterday during the day or at night	119 (29.7)	279 (70.3)
Feeding tinned, powdered or fresh animal milk to the baby yesterday during the day or at night	73 (18.4)	324 (81.6)
Feeding juice or juice drink to the baby yesterday during the day or at night	41 (10.3)	356 (89.7)
Feeding clear broth to the baby yesterday during the day or at night	29 (7.3)	368 (92.7)
Feeding yogurt to the baby yesterday during the day or at night	14 (3.5)	383 (96.5)
Feeding thin porridge to the baby yesterday during the day or at night	10 (2.5)	387 (97.5)
Feeding other liquids to the baby yesterday during the day or at night	15 (3.8)	382 (96.2)

mothers with only one child. It becomes difficult for mothers to give proper attention and focus entirely on one child while having two or more children. The role of family and society here is very crucial to support the mothers continuing EBF for six months. Bangladesh government has always emphasized infant and young child feeding (IYCF) and hence, various national strategies and plans have been executed and are in the pipeline implementing in collaboration with agencies like WHO and UNICEF [38]. However, these programs should incorporate the importance of having fewer children and the role of family and society to achieve a successful EBF.

Mothers having higher knowledge of EBF practiced EBF more compared to mothers with lower knowledge. Our finding buttresses some other studies where EBF practice was higher among those having high

Table 5. Bivariate analysis of factors affecting exclusive breastfeeding practice among mothers.

Variable	OR (95% CI)	P-value
<i>Mothers' age (years)</i>		
<30	1	
≥30	0.70 (0.42–1.16)	0.165
<i>Residence</i>		
Rural	1	
Urban	0.56 (0.37–0.85)	0.006
<i>Educational status</i>		
Illiterate	1	
Literate	4.40 (2.26–8.56)	<0.001
<i>Employment status</i>		
Unemployed	1	
Employed	0.57 (0.35–0.89)	0.013
<i>BMI (kg/m²)</i>		
<25.0	1	
≥25.0	1.32 (0.85–2.06)	0.214
<i>Parity</i>		
>1	1	
1	2.32 (1.46–3.70)	<0.001
<i>Child's age (months)</i>		
≤3	1	
>3	0.92 (0.61–1.40)	0.693
<i>Mothers' knowledge of exclusive breastfeeding</i>		
Low	1	
High	5.21 (3.34–8.11)	<0.001
<i>Mothers' attitude towards exclusive breastfeeding</i>		
Less favorable	1	
Favorable	59.83 (31.87–112.33)	<0.001

BMI: Body mass index, CI: Confidence interval, OR: Odds ratio.

maternal knowledge on EBF [24, 43]. This finding draws attention to the fact that a lack of knowledge of EBF can result in a low EBF practice, particularly in Bangladesh.

Another factor directly associated with EBF practicing was having a favorable attitude towards EBF. A positive attitude among mothers contributed to a higher practice of EBF. This can be explained by the fact that a positive maternal attitude toward breastfeeding may lead to continued breastfeeding for a longer period and increase the chance of successful EBF for six months.

The present study used a field-tested and validated questionnaire that improved the credibility of the findings. Besides, the questionnaire included both open and closed ended items which enabled us to overcome the drawbacks of following only quantitative and qualitative approaches.

There are some limitations to the present study that need to be addressed. First, being a cross-sectional survey, the cause-effect association cannot be established. Second, the present study was conducted among mothers seeking care at a health facility; hence, the findings may not represent the situation of the entire community. A community-based study would be much suitable to evaluate the knowledge, attitudes, and practices of EBF at community level. Third, the current study used a non-probability sampling technique which might affect the generalizability of the findings. Fourth, the study had both qualitative and quantitative

Table 6. Multivariate logistic regression analysis of predictors of exclusive breastfeeding practice among mothers.

Variable	AOR (95% CI)	P-value
<i>Residence</i>		
Rural	1	
Urban	1.34 (0.57–3.16)	0.506
<i>Educational status</i>		
Illiterate	1	
Literate	3.06 (1.01–9.32)	0.049
<i>Employment status</i>		
Unemployed	1	
Employed	0.85 (0.40–1.80)	0.664
<i>Parity</i>		
>1	1	
1	3.07 (1.21–7.78)	0.018
<i>Mothers' knowledge of exclusive breastfeeding</i>		
Low	1	
High	2.58 (1.31–5.07)	0.006
<i>Mothers' attitude towards exclusive breastfeeding</i>		
Less favorable	1	
Favorable	43.18 (21.51–86.66)	<0.001

AOR: Adjusted odds ratio, CI: Confidence interval.

aspects. However, the evaluation was done based on the quantitative analysis only. Qualitative analysis such as mothers' quality of knowledge might provide some valuable insights, which have not been assessed.

5. Conclusion

The mothers' knowledge and attitudes towards EBF were overall satisfactory; while there was a poor practice of EBF. The mother's level of education, number of children, and maternal knowledge of and attitudes towards EBF played a vital role in determining the practice. We recommend that the government implements interventions focusing more on ensuring EBF practice among mothers in addition to mere dissemination of information to improve their knowledge and attitudes, especially considering the socio-demographic barriers to EBF practicing.

Declarations

Author contribution statement

Marjia Sultana, Towhid Hasan: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

Shishir Dhar: Conceived and designed the experiments; Performed the experiments; Contributed reagents, materials, analysis tools or data; Wrote the paper.

Lincon Chandra Shill, Nafisa Habib Purba, Akibul Islam Chowdhury: Performed the experiments; Wrote the paper.

Suvasish Das Shuvo: Analyzed and interpreted the data; Wrote the paper.

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Data availability statement

Data will be made available on request.

Declaration of interest's statement

The authors declare no conflict of interest.

Additional information

No additional information is available for this paper.

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