



Factors affecting Early Discontinuation of Exclusive Breastfeeding – A study of Hospitalized Infants

Dr. Rowshan Jahan Akhter^{1*}, Nasreen Begum², B H Nazma Yasmeen³

¹Assistant Professor, Department of General Pediatrics, Bangladesh Shishu Hospital & Institute, Sher-E - Bangla Nagar, Dhaka, Bangladesh

²Assistant Professor, Department of Community Medicine, Northern International Medical College, Dhaka, Bangladesh

³Professor and Head Department of Pediatrics, Northern International Medical College, Dhaka, Bangladesh

*Corresponding Author

Dr. Rowshan Jahan Akhter

Assistant Professor, Department of General Pediatrics, Bangladesh Shishu Hospital & Institute, Sher-E - Bangla Nagar, Dhaka, Bangladesh

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Abstract: Introduction: Breast milk is a natural and nutritious food which is considered to be the safest food for neonates and infants. It boosts immune system, controls gastrointestinal infections, pneumonia, UTI and provides proper nutrients like protein, fat, vitamins, and minerals. **Aim of the Study:** The study aimed to find out the factors of early discontinuation of exclusive breastfeeding (EBF) during the first 6 months of life of hospitalized babies. **Methods:** It is an observational prospective study conducted at the Bangladesh Shishu Hospital and Institute. The sample size was 191 infants and their mothers. Data was collected through a structured questionnaire prepared by the researchers and applied to the mothers of infants. The study was conducted during the period of 1 July 2020- 31 December 2020. **Result:** Most of the infants 111(52.3%) were aged <20 days and most of the mothers 154(80.6%) were aged more than 20 years. Majority of the mothers 107(56.1%) were housewives and 14(7.3%) infants were preterm. Most of the babies 125(65.4%) weighted more than 2500g. In this study majority of the babies 161(84.29%) were healthy cried immediately after the birth. Majority of the babies 105(55%) could suck breast milk properly after the birth. In 103(53.9%) cases, breastfeeding was initiated within an hour after the birth. Normal vaginal delivery was done in 98(51.3%) cases and caesarean section was done in 93(48.7%) cases. Majority of the mothers 113 (59.2%) had misconception about quantity of milk they believed that they don't have enough milk. Only 32(16.8%) mothers doesn't like breastfeed the baby and 65(34%) mothers believed that formula is better than breast milk and 107(56%) mothers had lack of knowledge about advantages of breast milk. **Conclusion:** This prospective study found that the level of the discontinuation of exclusive breastfeeding is high having several factors like having misconception about quantity of milk, lack of knowledge about advantages of breast milk, preference of formula milk over breast milk. More over low socio-economic background, less educational level of mothers, working mothers having no breast feeding corner in work place, and mothers having various breast problem (inverted nipple, flat nipple, cracked nipple, Mastitis, breast abscess, Faulty technic of breast feeding) were also included.

Keywords: Factors, discontinuation & exclusive breastfeeding.

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INTRODUCTION

Breast milk is God-gifted and natural food which is considered to be the safest food for neonates and infants. The World Health

Organization recommended initiation of breastfeeding for newborn babies within the 1st hour after birth. Also, giving only breast milk not even a drop of water for up to 6 months of age

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(Exclusive breast feeding), and continuation of breastfeeding along with appropriate complementary feeding up to 2 years is recommended [1].

Breastfeeding boosts the immune system, controls gastrointestinal infections, pneumonia, UTI and provides proper nutrients like energy, protein, fat, vitamins, and minerals [1–4]. It is also cost-effective as there is no need to buy breast milk substitutes [5–7].

During the world breastfeeding week, 2018, a target of achieving 50% mothers with optimum breastfeeding practices globally by 2025 was declared to prevent malnutrition [8]. Despite the benefits of breastfeeding, rates of breastfeeding practice are still low worldwide. According to the global breastfeeding scorecard, only 23 of 194 countries have exclusive breastfeeding (EBF) rates above 60% [9]. In South Asia, EBF is highest in Sri Lanka (75.8%) and lowest in Pakistan (37.7%) [10]. In Bangladesh, current EBF practices are reported at 55% [11], which is an increase from 28% in the 1990s [12]. However, EBF trends have fluctuated from year to year, at 42% in 2004, 43% in 2007, 64% in 2011, and 55% in 2014 [11].

Studies done in Bangladesh showed that 17% of babies were fed colostrum in the 1990s, increasing to 51% in 2014 [11, 12]. The Government and the Breast Feeding Foundation (BBF) initiated the national code of marketing of breast milk substitutes in 1993. The introduction of the Baby-Friendly Hospital Initiative in 1991, the Maternity Leave Law in 2001, and the policy of optimal duration of EBF for 6 months (180 days) in 2003 are some of these initiatives [13, 14] and they are successful to some extent.

Understanding the barriers of exclusive breastfeeding is also important. In high-income settings, the marketing of infant formula and short maternity leave policy are the barriers of EBF [15–17]. Women in Bangladesh are less directly exposed to traditional marketing of formula milk compared to other countries. But many health professionals, and non- health professionals, are influenced by the marketing personals and prescribed infant formula as breast milk substitute and established breast milk is inadequate. Hence, this study aims to determine

the factors of early discontinuation exclusive breast feeding.

OBJECTIVES

The objective of this study was to determine the factors of early discontinuation exclusive breastfeeding.

METHODOLOGY & MATERIALS

It is an observational study conducted at the Bangladesh Shishu (Children) Hospital & Institute. Sample size was 191 hospitalized infants aged up to 6 months and their mothers. Data were collected through a structured questionnaire prepared by the researchers and applied to the mothers of the infants. The study was conducted during the period of 1 July 2020- 31 December 2020.

Inclusion Criteria

- All babies who were admitted in hospital with early discontinuation of exclusive breastfeeding.
- Babies aged up to 6 months.

Exclusion Criteria

- Infants for whom breastfeeding had been contraindicated were excluded.
- Infants received pre-lacteal feeds.

All data were presented in a suitable table and expressed as frequency and percentage. A description of each table was given to understand them clearly. All statistical analysis was performed using the statistical package for social science (SPSS) program version 21. Value of $p < 0.05$ was considered statistically significant.

RESULT

In this study 191 babies who were hospitalized and aged up to 6 months and their mothers were included. The socio- demographic characteristics of the study population showed most of the infant 111(52.3%) were aged <20 days and most of the mothers 154(80.6%) were aged more than 20 years. Majority of mothers 57(29.8%) were educated up to the primary school level which is statistically significant ($p=0.000$). Most of the mothers 107(56.1%) were housewife which is statistically significant ($p=0.002$). Majority of the families 93(48.7%) had monthly income less than 20,000 taka (tk) (Table-1).

Table 1: Socio-demographic characteristics of the study population

Variables	Frequency	Percentage	p-value
Infant's age (Days)			
Less than 10 days	29	15.2	
10 - 20 days	72	37.7	

Variables	Frequency	Percentage	p-value
21days to 6 months	90	47.1	
Mother's age (Years)			
< 20	37	19.4	
≥20	154	80.6	
Mother's education			
Illiterate	7	3.7	0.000
Non-formal education	13	6.8	
Primary school completed	57	29.8	
Secondary school completed	51	26.7	
SSC or equivalent completed	33	17.3	
HSC or equivalent completed	21	11.0	
Graduate and above completed	9	4.7	
Occupation of mother			
Housewife	107	56.1	0.002
Service holder	21	11.0	
Business	7	3.7	
Garments worker	17	8.9	
Day laborer	28	14.7	
House-Maid	7	3.7	
Others	4	2.1	
Monthly income of the family (Taka)			
<20,000	93	48.7	
20,000-40,000	71	37.2	
>40,000	27	14.1	

Regarding infant's health status and feeding practice we found that 125(65.4%) infants were term & weight more than 2500g. Majority of the babies 161(84.29%) were healthy immediately after the birth which is statistically significant ($p=0.000$). The most common illness of the babies were perinatal asphyxia (PNA) 23(33%), pre term low

birth weight (PTLBW) 21(26.7%), and Neonatal sepsis (N. Sepsis) 29 (19.9%) In some babies multiple illnesses coexists. Majority of the babies 105(55%) could suck breast milk properly after the birth in day 1. In 103(53.9%) cases, breastfeeding was initiated within an hour after the birth which is statistically insignificant ($p=0.3$) (table-2).

Table 2: Infant's health status and feeding practice

Variables	Frequency	Percentage	p-value
Gestational age			
Term (AGA)	125	65.4	
IUGR	52	27.2	
Pre term	14	7.3	
Birth weight of babies			
< 2500g	66	34.6	
> 2500g	125	65.4	
Baby's condition immediately after birth			
Healthy	161	84.29	0.001
Sick	30	15.70	
Type of illness immediately after birth			
PNA	23	76.6	0.3
PTLBW	21	70	
N. Sepsis	28	93.3	
N. Jaundice	16	53.3	
Others	13	43.3	
Multiple conditions co- exists			
Sucking of breast milk immediately after birth			
Good	105	55.0	0.2
Poor	86	45.0	

Variables	Frequency	Percentage	p-value
Baby able to suck well breast milk (Days)			
Day 1	105	54.9	
Day 2	26	13.6	
Day 3	21	10.9	
Day 4	18	16.8	
Day 5	9	04.71	
Others	12	06.28	
Initiation of breastfeeding			
Within an hour	103	53.9	0.3
After an hour	88	46.1	
Duration of exclusive breastfeeding (Months)			
≤1	103	53.9	
≤2	38	19.9	
≤3	25	13.1	
≤4	13	6.8	
≤5	7	3.7	
<6	5	2.6	

In this study we found e factors of early discontinuation of exclusive breastfeeding (Infant factors). Cleft lip in 7(3.6%) infant, Cleft palate in 5(2.6%), Congenital heart disease CHD in 13(6.8)

and other congenital malformation 9(4.7%) were also noticed. During hospital stay infants were diagnosed as Sepsis, Diarrhea and pneumonia (Table-3).

Table 3: Infant’s factors of early discontinuation of exclusive breastfeeding

Variables	Frequency	Percentage	p-value
Congenital malformation			
Cleft lip	7	3.6	
Cleft palate	5	2.6	
CHD	13	6.8	
Others	9	4.7	
Type of illness at present			
Sepsis	71	37.2	0.001
Diarrhea	57	29.8	
Pneumonia	59	30.9	
CHD	16	8.4	
Meningitis	7	3.7	
Others	10	5.2	

In our study we found that factors of early discontinuation of exclusive breastfeeding (Mother’s factors). Majority of the mother had caesarean section 123(64.4%) which is statistically significant (p=0.001). Working mothers had variable working hours 29(15.2%) had 2-5hours, 34(17.8%) work up to 6-8 hours and 21(11%) had 9-12 hours a day. Among the 84 working mothers, there was no breastfeeding corner in their workplaces in 79(93.7%) cases. We also found that most of the

mothers had breast problem among them majority of mothers 49(25.7%) had inverted nipple, 37(19.4%) had cracked or fissured nipple, 25(13.1%) had flat nipple. Faulty technique was found in 84(44%) mothers. We found total 12(6.2%) mothers were sick among them Psychosis 4(2.1%), Pelvic Inflammatory disease (PID) 3(1.6%), Diabetes Mellitus (DM) 3(1.6%) and Peptic Ulcer Disease (PUD) 2(01%) cases (Table -4).

Table 4: Factors related to mothers in early discontinuation of exclusive breastfeeding

Variables	Frequency	Percentage	p-value
Mode of delivery			
Normal vaginal delivery	68	35.6	0.001
Caesarean section	123	64.4	
Working hours of mothers			
(2-5)	29	15.2	0.03

Variables	Frequency	Percentage	p-value
(6-8)	34	17.8	
(9-12)	21	11	
Breastfeeding corner in working place			
Present	5	6.3	0.5
Absent	79	93.7	
Breast problem of the study mothers			
Inverted nipple	49	25.7	
Cracked or fissured nipple	37	19.4	
Flat nipple	25	13.1	
Mastitis	5	2.6	
Breast abscess	4	2.1	
Absent	71	37.2	
Faulty technique of breastfeeding			
Present	84	44	
Absent	107	56	
Disease of mothers			
Psychosis	4	2.1	
PID	3	1.6	
DM	3	1.6	
PUD	1	0.5	

Present study showed the perception and attitude of mothers towards breast feeding. Majority of the mothers 113 (59.2%) had misconception about quantity of milk and they believed that they didn't have enough milk which was statistically significant ($p=0.002$). Only 32(16.8%) mothers

doesn't like breastfed their baby and 65(34%) mothers believed that formula is better than breast milk, 107(56%) mothers had lack of knowledge about benefits of breast milk which was statistically significant ($p=0.002$) (Table-5).

Table 5: Perception and attitude of mothers towards breast feeding

Variables	Frequency	Percentage	p-value
Misconception of mother (Not having enough milk)			
Present	113	59.2	0.002
Absent	78	40.8	
Mothers didn't like breastfed the baby			
Yes	32	16.8	0.2
No	159	83.2	
The mother believes that formula is better than breastfeeding			
Yes	65	34.0	0.002
No	126	66.0	
Lack of knowledge about the benefits of breastfeeding			
Present	107	56	0.002
Absent	84	44	

DISCUSSION

In this study most of the infant 111(52.3%) were aged <20 days and most of the mothers 154(80.6%) were aged more than 20 years. Nadine Zabliith and Siobhan Reilly in their study found the mean age of the mothers was 13.3 ± 6 years whereas Yasuda *et al.*, found 53.3% mothers were aged 30-40 years [18, 19]. Majority of mothers in this study, 57(29.8%) were educated up to the primary school level which is statistically significant ($p=0.000$). Most of the mothers 56.1% were housewives which is statistically significant ($p=0.002$). Bayew Kelkay *et*

al., found majority of mothers 42.7% were educated up to the college and above and 53.5% of the mothers were housewives [20]. In this present study, 125(65.4%) infants were term and 125(65.4%) babies were weight more than 2500g. Reny Joseph *et al.*, in their study found 87.9% babies were term and 86.3% were weight ≥ 2.5 kg [21]. In another study, Moraes BA *et al.*, in their study found 16.7% infants gestational age was less than 37 weeks and 26.7% babies' weight were less than 2500g [17]. In this present study found that, majority of the babies, 105(55%) could suck breast

milk properly after birth. Moraes BA *et al*, in their study found 29.4% could not suck breast milk properly after birth and 42.5% were given substitute [17]. In this present study, 103(53.9%) infants were exclusively breastfed during the first month. A prospective cohort study by RSV *et al*, found that 60% of infants were exclusively breastfed in the first six months, and around 10% had already been weaned [15]. A study conducted in Jordan, South-East Asia by Abuidhail J *et al*, found only 37.8% of infants at 30 days of age were exclusively breastfed, dropping to 6% in the 4th month of the infant's life [22]. The association between the infant's age and early interruption of EBF also showed statistical significance in this study. In this study, 49(25.7%) mothers had inverted nipple, 37(19.4%) had cracked or fissured nipple, 25(13.1%) had flat nipple. H. L. O. Catunda *et al*, in their study reported 5% mothers to have cracked nipples [23]. Majority of the mothers 113(59.2%) believed that they do not have enough milk which is statistically significant ($p=0.001$). H. L. O. Catunda *et al*, reported 10% mothers had little or no milk [23]. All babies (100%) were sick during the study conducted which is statistically significant ($p=0.001$). Zannat NA *et al*, also had similar findings [24]. Most of the mothers 107 (56%) of this study had lack of knowledge about breastfeeding and hence 65(34%) mothers believed that formula is better than breastfeeding which is statistically significant ($p=0.002$). Bayew Kelkay *et al*, in their study reported that 82.6% mothers had good knowledge about breastfeeding but 34.6% mothers believed that formula is better than breastfeeding [20].

Limitations of the Study

The study limitation is small sample size. As it is a single center study, hence, a broad conception of the whole situation may not be possible.

CONCLUSION

This prospective study found that several factors related to mothers and their babies are responsible for early discontinuation of exclusive breastfeeding like having misconception about quantity of milk, lack of knowledge about advantages of breast milk, preference of formula milk over breast milk. More over low socioeconomic background, less educational level of mothers, working mothers having no breast feeding corner in work place, and mothers having various breast problems (inverted nipple, flat nipple, cracked nipple, Mastitis, breast abscess, Faulty technique of breast feeding) were also included. Congenital malformations i.e cleft lip, cleft palate etc., and some illness i.e Pneumonia, Diarrhea, sepsis etc of babies were the infant's factors in this regard.

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Ethical approval: The study was approved by the Institutional Ethics Committee.

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