

Factors associated with failure of early initiation of breast feeding among the female workers at the readymade garments in Gazipur, Bangladesh.

Abstract:

Background

Early initiation of Breastfeeding is widely known for its important role both in mothers and babies. Although it's significant role in maternal and new-born baby's health outcomes, initiation of breastfeeding is limited in those mother who are working in the factory. This study examines the factors associated with early initiation of breastfeeding in the Readymade Garments factory in Bangladesh.

Methods

A cross sectional study was conducted among RMG working women in Gazipur district, Bangladesh. Data were collected in a random sampling method in the 4 RMG factories. In this survey 452 lactating mothers are selected who had at least 1 baby less than 6 months age. The survey data were analysed using both descriptive and inferential statistical methods. Associations between the outcome variable and each of the independent variables were tested using chi-square. Logistic regression was used for multivariate analysis.

Results

The percentage of early initiation of breastfeeding within 1 hour of birth is only 40%. 41.6% mother initiate early breast feeding where their age group 18-25years and 25 to 30 years (AOR: 3.927, 95% CI 0.652-9.190), 31-45 years (AOR: 3.927, 95% CI 1.183-13.038) found higher likelihoods of not practicing early initiation of breast feeding (EIBF) than younger mother. Illiterate educated mother (AOR: 6.864, 95% CI, 1.109-42.490), primary educated mother (AOR: 1.291, 95%CI, 0.695-2.396) found higher odds of not practicing EIBF than secondary or above educated mother. The delayed initiation of breastfeeding was significantly 74% following childbirth by caesarean section than vaginal birth (AOR: 0.708; 95 %CI 0.328-1.531). 86.4% mother having delayed initiation of breast feeding who had a history of pre lacteal feeding (AOR: 0.60, 95% CI, 0.033-0.110) and 91% mother didn't introduce colostrum feeding which remarked as delayed initiation and (AOR: 8.963, (95% CI, 4.297-18.696).

Conclusions

Maternal age, Poor education, delivery procedure, pre lacteal feeding and colostrum feedings were the determinants of the failure of early initiation of breast feeding among RMG mothers. To ensure healthy outcomes in future, it's necessary to promote and enforce early initiation of breastfeeding among lactating mother who work in a RMG factory through proper counselling during ANC and PNC, awareness program or giving mental support when needed. Friendly work environment also plays a vital role to minimize these barriers.

Keywords

Breast feeding, Breast milk, early initiation, Ready-made garments worker, Bangladesh.

Background

Breast feeding is an essential food for the child health and their survival which is the natural first food for babies. This first breast milk is known as colostrum which looks thicker and more yellow than mature milk. It contains full of protein and nutrient dense like carotenoids, vitamin A, Zinc, minerals, magnesium [1]. It maintains the same composition until several hours after birth [2]. It helps to maintain the first immunization of infants [3]. Without taking any other foods or liquids like honey, sugar water, formula milk or even water initiation of breast feeding within the first hour of life is known as early initiation of breast feeding [4].

United Nations International Children's Emergency Fund (UNICEF) and world health Organization (WHO) recommendation that children should exclusively breast feed for the first 6 months of life to fulfill the maximum growth and development of health both physically and mentally but 2015-2020 report say that only about 44% of infants aged 0–6 months worldwide were exclusively breastfed [5]. Because of feeding breast milk both mother and children are benefited equally [6]. In case of children, feeding breast helps to prevent the crucial causes of neonatal death due to sepsis, acute respiratory tract infection, meningitis, diarrhoea and early obesity [7]. Other side, in case of mother, helps to delay the return of fertility and reduce the complication like post-partum hemorrhage, pre-menopausal breast cancer, ovarian cancer, hypertension, hyperlipidemia [7]. In addition to the benefits of mother and children, exclusive breast feeding may provide financial support by reducing direct and indirect cost, physician, clinic/hospital cost as well as all treatment cost. Formula milk buying cost is introduced as direct cost which may reduce by exclusive breast feeding

practice. Other hand, time and wages lost by parents cause of attending sick child should be consider as indirect cost [8].Research report noticed that, Infants who are feeding breast milk are 14 times less likely to die in the first 6 month in between contrasted with non-breast feeding infants who are facing 5-9 times higher risk of death due to infection [9]. According to survey 2015,it was found that in the low & middle income countries, breast feeding practice was increased up to near universal level (90-95%) where 823000 death could have been saved [10] and the rate of exclusive breastfeeding in the first 6 months of age increased from 35% in 2005 to 42% in 2018 [11]

According to the Bangladesh Demographic and Health Surveys (BDHS),the prevalence of EBF practicing rate 45% in 1993–94 and 1999–2000 [12, 13],42% in 2004 [14],43% in 2007 [24] and 65% in 2022 [15]. BDHS report also indicated that the prevalence of EBF noticeably increased to 64% in 2011 [16] which further declined to 55% in 2014 [17] and latest update rate of exclusive breast feeding in Bangladesh up to 5 month is 65% though 98% of pregnant women are desire to breastfeed exclusively [18].Unfortunately, At the time of collection of data from the survey of BDHS on National prevalence of EBF, it did not supply detailed information about EBF but A recent study reported that the prevalence of EBF rate was 36% in a rural sub-district in Bangladesh that showed a significantly lower rate [19].The causes of lower rates are the inappropriate feeding practice such as introducing pre-lacteal food, rejection of colostrum, delayed initiation of breast feeding, [20,21].Several study marked that delayed initiation of breastfeeding (EIBF) is one of the major cause of improper breast feeding or nonexclusive breast feeding [22].Early initiation of breast feeding which is defined as introducing of breast milk to babies within the first hour of birth and ensuring colostrum feeding to new-borns [23], EIBF is plays a vital role to ensure colostrum for the baby which acts as a first feed and first immunization for new born and creates the bonding between the infant and the mother, which improves the cognitive development [23]. Despite of all benefits of early initiation of breastfeeding, the rates are low. Globally only 47% of new-borns were breastfed within 1 h of birth in 2022, an increase from 43% in 2017 [24] In Asia early initiation of breastfeeding ranged from 32 to 40% and 40% in West and Central Africa, 65% in Southern Africa, 62% in Kenya, 66% in Uganda and 80% in Rwanda [25, 26, 27]. Early initiation of breastfeeding has been fluctuating in Tanzania where In 2004, the rate was 59%, in 2010 49% and in 2016 the rate is 51% [28].Research highlighted that various factors have been associated with early initiation of breastfeeding .Such as maternal age, occupation,

culture, Antenatal care, pre lacteal feeding, Place of delivery, mode of delivery number of children [29, 30]

If we point out the global record, we can find that in Nigeria and Tanzania, women who delivered at health facilities had 1.5–2 times higher odds of EIBF within 1 h after birth than those delivered at home [28,31]. In between the mode of delivery, caesarean section is the main cause of delayed initiation of breast feeding [32]

In Bangladesh circumstance, in case of caesarean section, maximum time early introducing of breast feeding might delay due to maternal ill health [33-35]. Excluding health issue, to become a financial and family support for the family are one of the biggest cause of early initiation of complimentary food. In Bangladesh, day by day there has been increasing the number of female employee [36]. Similar study reports that in 2016, Female participation in the labour force has increased to 35.6%, from 4% which was in 1974. According to International Labor (ILO) Organization, the total number of women in workplace was 18.1 million in 2017 where Labour force participation among rural women exceeds (37.6%) than urban women (30.8%) [37]. In between 2000-2017, the percentage of the female employee was increased from 8.6% to 16.8% [38]. According to 2021 reports, 54% female employee works in the ready-made garments (RMG) in reproductive age [39] but they have less opportunity to breastfeed their children due to long working hours, lack of child care facilities, inappropriate lactating training, short break, and lack of privacy for breast feeding. Maximum workplace does not provide the facilities for refrigeration of pumped breast milk through almost all compliance based RMG factory has child care facility in their premises but maximum number of factories have not well decorated [40].

To build a suitable environment in the work place specially RMG factory, the Bangladesh Labor, KMEA (Bangladesh Knitwear Manufacturers and Exporters Association), BGMEA (Bangladesh Garment Manufacturers and Exporters Association) works together and commission a labor law (Act 18) for maternity mother for 112 days paid maternity leave. The labor act also order all companies to provide childcare facilities up to 6 years of age in their premises at least 40 according to the employee number [40]. In spite of having facilities maximum RMG factories except large factory never maintain all rules properly especially in case of child facilities and female workers faced lots of problem such as family crisis, lack of support, work pressure, stress, anxiety [41,42,43]. So many Research reported that limited number of high profiled factory have indoor medical service facilities for their employees and

medical team monitor and aware female maternity employee during ANC and PNC period [43,44].

However, having that kind of supportive facilities, usually total environments still now are not appropriate for mother to continue breast feeding in their work time because of time limitation, supportive environment and that's why maximum mother practicing early weaning in their maternity leave period [45,46]. The aim of the current study study was to determine the barriers of the early initiation breastfeeding among mothers who are working in the RMG sector, Bangladesh.

Objective of the study

General objective:

The general objective of the study is to find out the barriers of early initiation of breastfeeding among RMG working mothers in Gazipur, Bangladesh.

Specific Objectives:

- To find out the socio-economic background of the baby's mothers those are working in the readymade garments factory.
- To explore the distribution of early initiation of breastfeeding according to their socio-economic background.
- To determine the barriers of Early Initiation of Breast Feeding among the RMG female working mothers.

Materials and Methodology

Study Design:

A cross-sectional quantitative study was conducted to obtain the barriers and facilitators of breastfeeding in the first 6 months of life and promoting the feeding of breast milk by working mothers in the RMG sectors. In this selected factory, study was done among 452 female workers who are the population in this study and they are having at least 1 child

within 6 month of age. This age group was considered due to collection of current information about feeding status form mother.

Study Site:

This study was conducted during 6 monthly period (June to November) on the selected 4 ready-made garments (RMG) factories named Libas Textile ltd, Nippon Garments and Industries ltd, Ever Smart Bangladesh ltd (ESBL) and Amigo Bangladesh ltd (ABL).Those were situated at Gazipur (Sofipur, Tongi, Shreepur, Kaliganj) in Dhaka division. These factories had approximately 16000 workers where large portion is covered by female workers.

Sample size calculation:

In this study, Sample size (n=452) was calculated through using the following formula.

The formula was-

$$n=z^2 (PQ)/d^2$$

Z=Statistical certainty (for a 95%confidence level, Z=1.96)

P= 55%

= 0.55

Q=1-P

=1-0.55

=0.45

D=5%

=0.05

So, as per formula

$$n = \{(1.96)^2 \times (0.55 \times 0.45)\} / (0.05)^2$$

$$= 0.950796 / 0.0025$$

$$= 380.3184$$

Sampling method:

Simple random sampling technique was used in this study for the selection of the participants. The collection list of the mothers who had a child aged less than 6 months by the welfare officer in those factories were used as a sampling frame. A structured questionnaire was required among 5% of the total sample to prepare the exact information sheet. Data were collected based on extensive literature review.

Covariates:

Different Socio demographic information was considered as covariates. Age of the mother (18-25yrs, 26-30yrs, 31-45yrs), religion (Muslim, Hindu), Maternal education (illiterate, Primary, secondary or Above), Maternal BMI (Normal, Thin, Overweight or obese), income(10000-20000, 21000-30000, 30000 or above), head of the family (Male, Female), Antenatal care (ANC) visit (No ANC, 1-4 ANC, 4 visits or more), breast feeding counseling during ANC (Yes, No), breast feeding planning (Planned, Did not plan), Age of the infant (0 to 2 M, 3 to 4 M, 5 to 6 M), infant's gender (Male, Female), number of children (1st child, 2nd child, 3rd or over), place of delivery (Home delivery, Facility delivery), mode of delivery (Normal, caesarean section), Postnatal care (PNC) (Yes, No), pre lacteal feeding (Yes, No), Early initiation of breast feeding (≤ 1 h after birth, ≥ 1 h after birth), Exclusive breastfeeding history (yes, No), duration of breast feeding (≥ 8 , ≤ 8), colostrum feeding (No, Yes), Reasons of not feeding properly (come back to work place, only breast milk was not sufficient for feeding their baby, decreased breast milk, mothers illness). This expenditure was considered as independent variables and early initiations of breast feeding were considered as dependent variables.

Data Collection method:

Data were collected by face-to-face interview method. In this study interview is prepared through structured questionnaires which was administered to mothers on infant feeding practices at birth and within the last 24 hours. The questionnaire was prepared in English but face to face interview was done in Bangla. Data was collected by own self and 2 days data analysis training was given by the supervisor. Pre-testing interview was taken on total 20 mothers in 4 factories before the final data collection.

Outcome measure:

In this study, feeding practice was categorized in 2 ways. That is early initiation and delayed initiation. According to the World Health Organization (WHO) definition, The primary outcome variable was Early initiation of breast feeding (EIBF) which was expressed as ‘yes’ or ‘no’. WHO also clarify that, when a child is breast fed within 1 hour of birth it’s called early initiation, if not done then it’s called late initiation or delayed initiation [47].

Data analysis:

After collecting 452 data, questionnaires were summarized and then coded which was presented by using descriptive statistics and exported to SPSS windows version-20 for quick analysis. In the meantime, Bivariate and multiple logistic regressions were computed where variables having p values less than 0.05 in the multiple logistic regression models were associated with the dependent variable.

Ethical consideration:

The whole ethical clearance including survey and data collection procedure is approved from Independent university of Bangladesh in December 2022. All study participants provided informed written consent for this study. All record was stored in the separate protected file.

Result

Table .1.A: Distribution of the characteristics of mothers in the study subjects (n=452)

Variables	Frequency (n)	Percentage (%)
Age of the Mother		
18-25	214	47.3
26-30	203	44.9
31 -45	35	7.7
(Mean \pm SD)	25.91(\pm 3.686)	
Religion		
Muslim	389	86.1

Hindu	63	13.9
Maternal education		
Illiterate	19	4.2
Primary	271	60.0
Secondary or Above	162	35.8
Counsel on EBF during ANC visit		
No	202	44.7
Yes	250	55.3
EBF planning during pregnancy		
Planned	297	65.7
Did not plan	155	34.3
Maternal BMI		
Normal	322	71.2
Thin	87	19.2
Overweight or obese	43	9.5
Type of family		
Joint	211	46.7
Nuclear	241	53.3
Monthly household income		
10000-20000	109	24.1
21000-30000	278	61.5
30000 or above	65	14.4
(Mean \pm SD)	24763.27(\pm 5039.021)	
Head of the family		
Male	354	78.3
Female	98	21.7

Table-(1.A) presents the overall socio-demographic history of the 452 mothers those were participated in the survey and having at least 1 children within 6 months of age. In between the total number of population, the majority of the participant mother was Muslim (86.1%), 60.0% mothers completed primary level whereas 4.2% were illiterate and 35.8% had completed secondary or above level. Survey report also shows that during pregnancy period, more than half (55.3%) of mothers were counseling about EBF by healthcare provider during

ANC visit and 65.7% mothers were planned about it. For the fitness record purpose mother's BMI was calculated where results presented that 71.2% mothers BMI was in normal, 19.2% were in low normal range (Thin) and 9.5% mothers BMI was in overweight or obese. In this Table 1.A, we also notice that more than half participants (53.3%) were lived in nuclear family and maximum family head was male (78.3%).

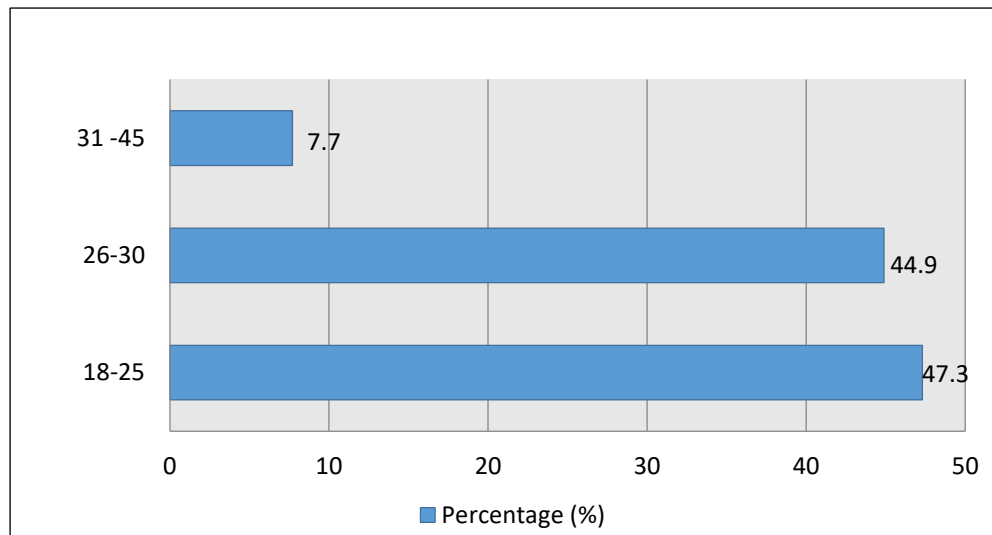


Figure 1: Different Age group status of mother

Figure 1 represents the bar diagram where the Y axis represents the age categories (18 to 25 years, 26 to 30 years and 31 to 45 years) of the mother and X axis represents the percentage of the mothers age those were participated in this study and the results shows that the majority (47.3%) of the mothers age group was in the 18-25 years.

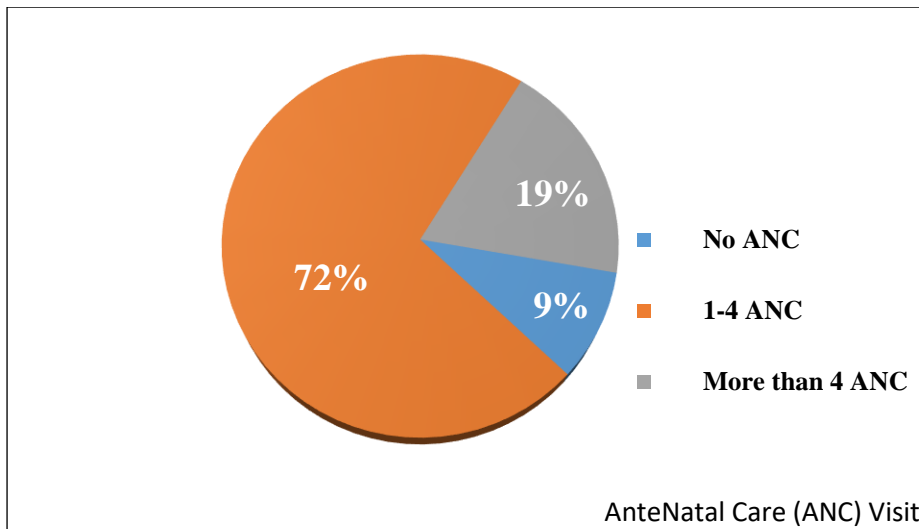


Figure 2: The history of ANC visit during pregnancy

In **Figure 2** the pie chart indicates the antenatal care visit history of mothers during their pregnancy time. Here we find that 72% of mother was attending the 1 to 4 ANC visits during their pregnancy and 19.0% were attending more than 4 ANC visits whereas 9.0% had no history of ANC Visit.

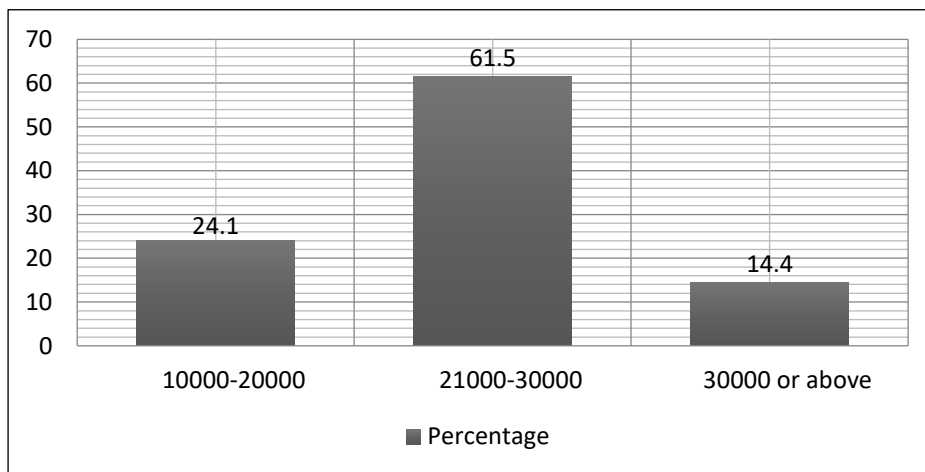


Figure 3: The percentage of the monthly household income

Figure 3 is a column chart which indicates that the monthly household income of the family of those mother who were involved in this study and income amount is categorized in 3 here we find that the maximum monthly household income (61.5%) was 21000 to 30000 taka (in BDT).

Table.1.B: Distribution of the characteristics of the baby in the study subjects (n=452)

Variables	Frequency (n)	Percentage (%)
Age of the baby		
0 to 2 Months	75	16.6
3 to 4 Months	297	65.7
5 to 6 Months	80	17.7
(Mean \pm SD)	3.49(\pm 1.060)	
Gender of the baby		
Male	240	53.1
Female	212	46.9
Birth order of the baby		
1 st child	233	51.5
2 nd child	166	36.7
3 rd or over	53	11.7

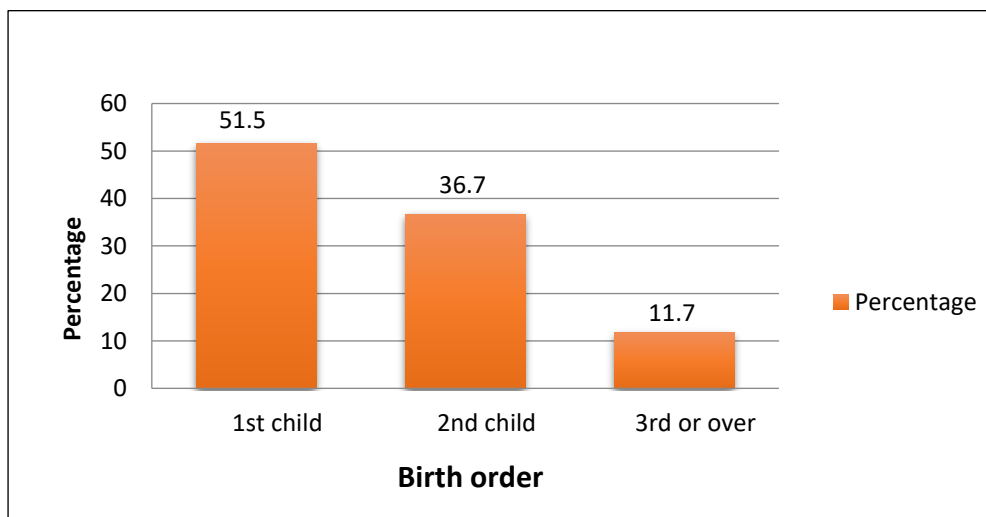


Figure 4: Birth order of the baby

Table.1.B represents the distribution of the characteristics of the both male and female baby whose age was 0 to 6 months and their birth order also published here. According to this table, we observe that the age of the baby was categorized (0 to 2 Months, 3 to 4 months and 5 to 6

months) and maximum age (65.7%) group of babies was 3 to 4 months. More than half (53.1%) of the baby was female and highest birth order (51.5%) of the baby was 1st child that was organized through column chart where X axis presented birth order category of the baby and Y- axis presented Percentage of birth order (figure 4).

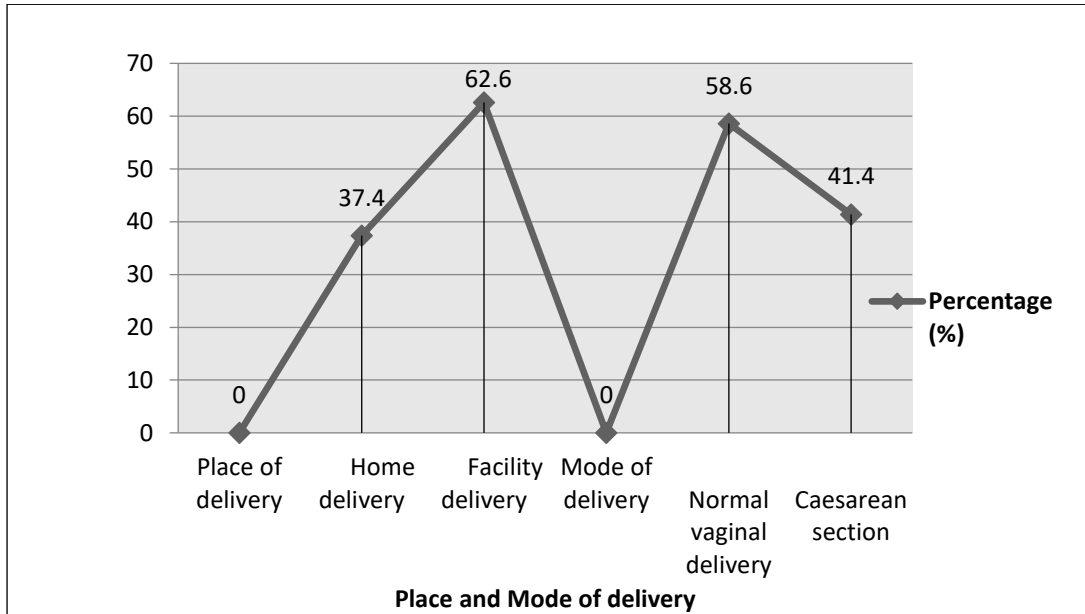


Figure 5: Percentage of place and mode of delivery

Figure 5 illustrates a line chart from which we can notice the overall delivery system of the study mother. Here, Horizontal Axis mentioned X-Axis and vertical Axis as mentioned Y-Axis, X Axis indicates the place and mode of delivery of the pregnant mother and Y- axis indicates their percentage. According to this study, 62.6% pregnant mothers were received hospital facilities for their delivery whither 41.4% had a history of caesarean section (C-Section). 58.6% given birth through normal Vaginal Delivery (NVD) in total population where 37.4% delivery was done at home.

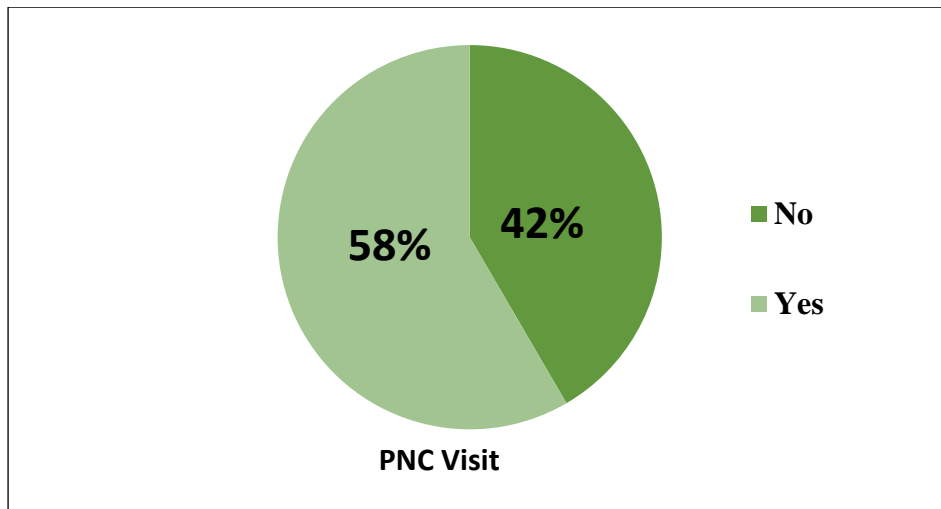


Figure 6: PNC visit after delivery (Abbreviation of PNC- Post Natal Care)

The percentage of postnatal Care visit after delivery is presented through a pie chart in (figure-6) where we observed that more than half (58%) of the mother had received postnatal care after their delivery where 42% mother didn't receive.

Table.1.C: Distribution of the Postnatal care system in the study subjects (n=452)

Variables	Frequency (n)	Percentage (%)
Receiving Breastfeeding counselling		
No	125	27.7
yes	327	72.3
From where		
Doctor	169	37.4
Trained birth attendant	78	17.3
Relatives	47	10.4
NGO health staff	33	7.3

The postnatal care system in the total number of the study subject (n=452) is illustrate on **Table.1.C**. Here, we find that the maximum number (72.3%) of mother received breast feeding counseling during their PNC visit. The counseling is delivered from doctor (37.4%), trained birth attendant (17.3%) from relatives (10.4%) and NGO health staff (7.3%).

Table.1.D: Distribution of the characteristics of breast feeding process in the study subjects (n=452)

Variables	Frequency (n)	Percentage (%)
Pre lacteal feed		
No	188	41.6
Yes	264	58.4
Colostrum feeding		
No	171	37.8
yes	281	62.2
Breast feeding frequency per 24 hour		
≥ 8	281	62.2
≤ 8	171	37.8
Time to give BF		
On demand	275	60.8
When baby cry	172	38.1
On schedule	5	1.1

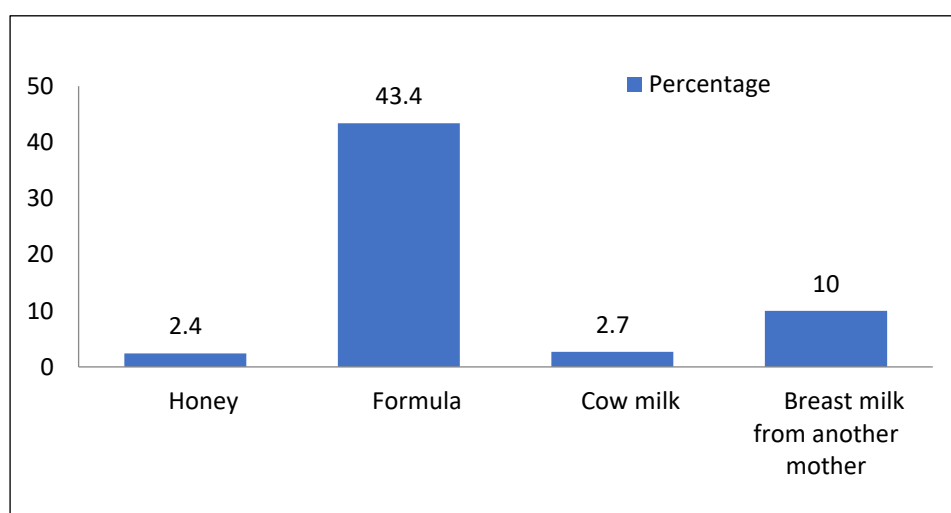


Figure 7: Different feeding status of infants

Table.1.D demonstrate the feeding history of the babies where we find that more than half (58.4%) of the baby had a history of pre lacteal feeding where 41.6% had not. In total number

of pre lacteal feeding baby,43.4% preferred to formula milk, history of feeding breast milk from another mother was 10%,2.4% taken honey and 2.7% taken cow milk which was represented in the **Figure-7** where X Axis presented pre lacteal feeding types of the baby and feeding percentage was illustrated on Y- axis.

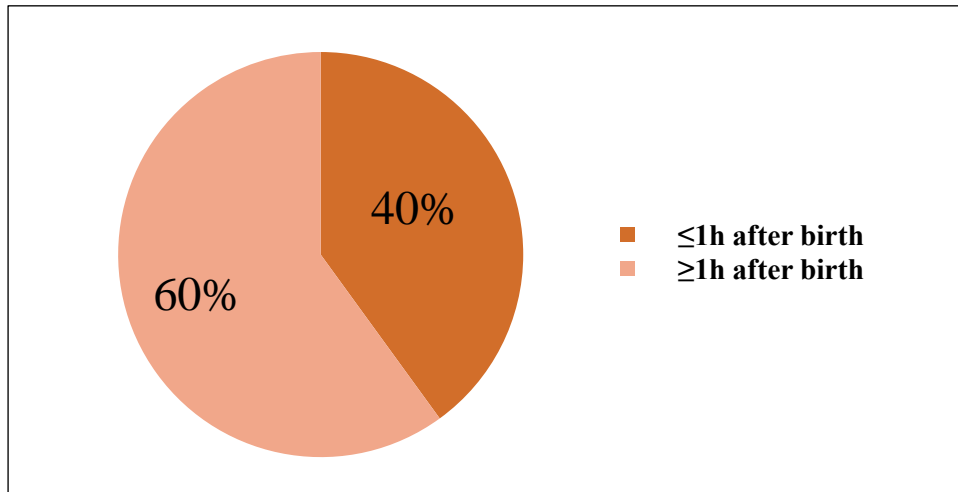


Figure 8: Early initiation of breast feeding

Figure 8 emphasize the percentage of early initiation of breast feeding where result showed that only 40% babies breast feeding history was is in less than 1 hour after birth that mean major portion (60%) was doing delayed initiation.

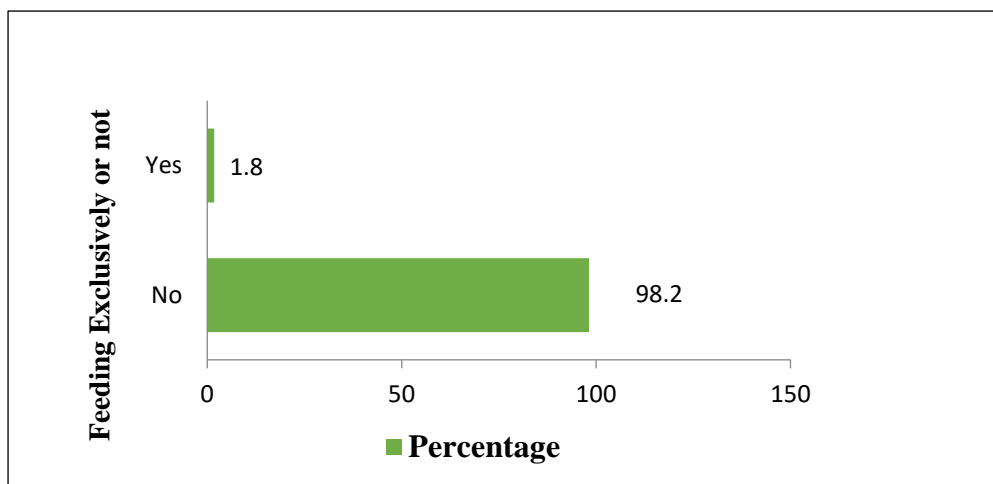


Figure 9: The diagram of exclusive breast feeding

Through **Figure 9** the study mention that only 1.8% baby was feeding breast milk exclusively in the total study subject (**n=452**) where 98.2% weren't feeding exclusively and this percentage had drawn in bar diagram where X axis indicate feeding percentage and Y- axis indicate the baby's feeding category that is exclusive or not.

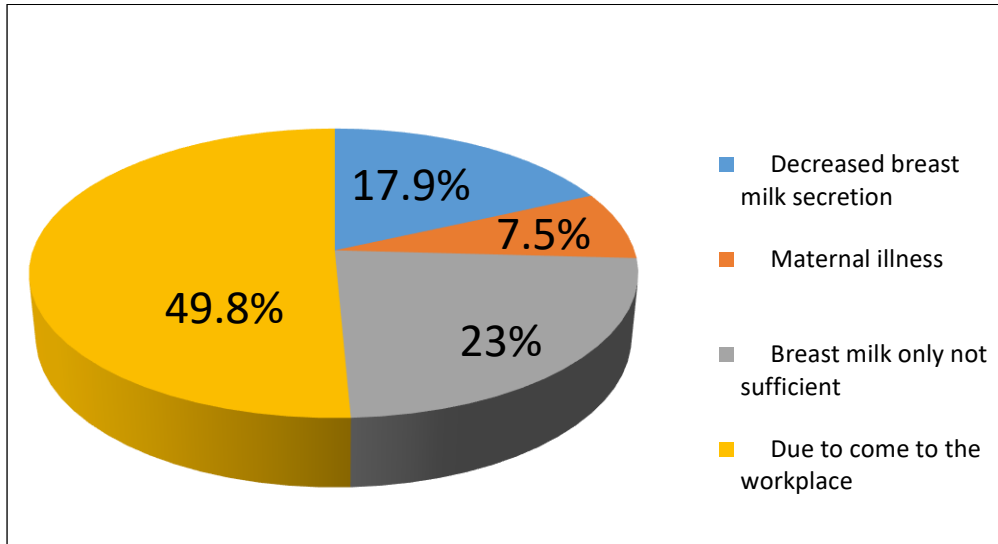


Figure 10: Reasons for not feeding properly

With the help of pie chart in **Figure 10** the study result illuminate the reasons of babies improper breast feeding. Here we remark that maximum mother (49.8%) answered that they were not feeding properly due to come back to work place whereas 23% answered was only breast milk was not sufficient for baby,17.9% mother's answer was decreased breast milk, and 7.5% mother didn't breast feed their baby properly due to their illness.

Table.2: Distribution of Early Initiation of Breast Feeding according to the characteristics of the mother.

Variables	Early Initiation of Breast Feeding (less than 1 hour)		P value
	Yes (%)	No (%)	
Age of the Mother			
18-25 years	41.6	58.4	
26-30 years	38.9	61.1	0.801

31 -45 years	37.1	62.9	
Religion			
Muslim	40.9	59.1	
Hindu	34.9	65.1	0.371
Maternal education			
Illiterate	10.5	89.5	
Primary	37.6	62.4	0.003
Secondary or Above	47.5	52.5	
ANC visit during pregnancy			
No ANC	38.1	61.9	
1-4 ANC	40.1	59.9	0.960
More than 4 ANC	40.7	59.3	
Counsel on EBF during ANC visit			
No	39.6	60.4	
Yes	40.4	59.6	0.864
EBF planning during pregnancy			
Planned	40.7	59.3	
Did not plan	38.7	61.3	0.676
Type of family			
Joint	42.2	57.8	
Nuclear	38.2	61.8	0.386
Monthly household income (BDT)			
10000-20000 tk	51.4	48.6	
21000-30000 tk	35.3	64.7	0.014
30000 or above tk	41.5	58.5	
Head of the family			
Female	38.8	61.2	
Male	40.4	59.6	0.772
Gender			

Male	37.9	62.1	
Female	42.5	57.5	0.326
Birth order of the baby			
1 st child	40.3	59.7	
2 nd child	39.2	60.8	0.946
3 rd or over	41.5	58.5	
Place of delivery			
Home delivery	40.1	50.9	
Facility delivery	34.6	65.4	0.002
Mode of delivery			
Normal vaginal delivery	50.2	49.8	
Caesarean section	25.7	74.3	<0.001
Received postnatal care service			
No	35.2	64.8	
Yes	46.8	53.2	0.013
Pre lacteal feed			
No	77.1	22.9	
Yes	13.6	86.4	<0.001
Colostrum feeding			
No	8.2	91.8	
Yes	59.4	40.6	<0.001
Breast feeding frequency per 24 hour			
≥8	53.4	46.6	
≤8	18.1	81.9	<0.001

Table 2 explains the overall results of the study subject which is related with the early initiation of breast feeding. We notice that the proportion of maternal age was related with the early initiation of EIBF where younger mother (18-25years) (41.6%) was more initiating breast milk within 1 hour than the aged mother and the EIBF tendency is poorer in Hindu mother (65.1%) than the Muslim mothers. Education had a positive effect on early initiation of breast feeding. We find that the proportion of babies receiving early initiation of breastfeeding increased with increasing maternal education. Mothers having secondary or

higher education (47.5%) were more likely to initiate early (within 1 hour) breast feeding and primary educated (37.6%) and illiterate mother (10.5%). Result also shows that the percentage of delayed initiation of breast feeding tendency is much more those mothers (61.9%) who were not receiving ANC service. Another result remarked that 61.3% Mothers those weren't planned about exclusive breast feeding and 60.4% mother missed counseling session during ANC were responsible for initiating delayed breast feeding to their baby after birth. Family plays a vital role for EIBF that we can realize this study. In this study, result showed that the mother who lived in a nuclear family had a tendency to delay initiation of breast feeding (61.8%). n Table 2, result illustrate that maximum EIBF (51.4%) was done in lower income (10,000 to 20,000 taka) family rather than middle and high income family and results also indicate that those family head was female they had history of 61.2% EIBF in more than 1 hour.

About 65.4% mother's having delayed initiation of breast feeding who had an history of facility delivery and 74.3% of mothers who experienced C-Section delivery were initiated breastfeeding within the first hour after delivery compared to 50.2% of mothers who delivered through NVD either at home or hospital. So, the Result shows that higher proportion of infant's breastfed within one hour who has a history of normal vaginal delivery in view of C-Section.

Babies those fed any pre lacteal feeding (86.4%) were less early initiated breast milk than no pre lacteal feeding baby (22.9%). According to the Table-2, decreasing the consumption of colostrum feeding was inversely proportionate to the increasing the delayed initiation of breast feeding (91.8%). During interview, when asked the mother about the frequency of breast feeding per 24 hours, we noticed that 81.9% baby was feeding less than 8 times per 24 hours who had a history of delayed initiation of breast feeding.

Table.3: Factors associated with Early Initiation of Breast Feeding

Variables	Crude OR	95% CI		P value
		Lower limit	Upper limit	
Age of the Mother				
18-25 years	Reference			

26-30 years	1.118	.755	1.654	.578
31 -45 years	1.205	.576	2.519	.620
Religion				
Muslim	Reference			
Hindu	1.288	.739	2.247	.372
Maternal education				
Secondary or Above	Reference			
Primary	1.501	1.012	2.226	.044
Illiterate	7.700	1.723	34.414	.008
ANC visit during pregnancy				
More than 4 ANC	Reference			
1-4 ANC	1.024	.631	1.662	.923
No ANC	1.115	.523	2.377	.778
Counsel on EBF during ANC visit				
Yes	Reference			
No	1.034	.708	1.509	.864
EBF planning during pregnancy				
Did not plan	Reference			
Planned	.919	.617	1.367	.676
Maternal BMI				
Overweight or obese	Reference			
Normal	1.231	.642	2.360	.531
Thin	1.241	.592	2.602	.568
Type of family				
Nuclear	Reference			
Joint	.846	.581	1.234	.386
Monthly household income (BDT)				
30000 or above	Reference			
21000-30000	1.305	.752	2.265	.344

10000-20000	.672	.362	1.250	.210
Head of the family				
Female	Reference			
Male	1.070	.677	1.692	.772
Gender of baby				
Male	Reference			
Female	.828	.568	1.207	.326
Birth order (Reference child)				
3 rd or over	Reference			
2 nd baby	1.103	.588	2.068	.761
1 st baby	1.049	.573	1.923	.876
Place of delivery				
Home delivery	Reference			
Facility delivery	1.822	1.235	2.687	0.002
Mode of delivery				
Normal vaginal delivery	Reference			
Caesarean section	2.918	1.942	4.383	<0.001
Received postnatal care service				
Yes	Reference			
No	.618	.422	.905	.014
Pre lacteal feed				
No	Reference			
Yes	.047	.029	.076	<0.001
Colostrum feeding				
Yes	Reference			
No	16.428	9.049	29.823	<0.001

The mothers aged between 26-30 years old have 1.118 (COR: 1.118, CI: 0.755-1.654) times lower chance of EIBF (within 1 hour) to their baby compared to the mothers aged between 18-25 years old. Similarly, the mothers aged 31-45 years old have 1.205 (COR: 1.205, CI: 0.576-2.519) times lower chance to EIBF (within 1 hour their baby) compared to 18-25 years old mother.

Our findings shows that the Hindu mothers have 1.288 times less chance (COR: 1.288, CI: 0.739-2.247) of EIBF within 1 hour to their babies compared to the Muslim mothers.

In case of maternal education, we observe that primary educated mother having 1.501 (COR: 1.501, CI: 1.012-2.226) times less chance to early initiate of breast feeding to their babies in comparison to secondary or above educated mother. Similarly illiterate mother having 7.700(COR: 7.700, CI: 1.723-34.414) times higher chance to fail early initiate of breast feeding to their baby. So, the result says that, More educated mother have more chance to initiate early breast feeding to their baby.

Another findings that the mother who had a history of No ANC during Pregnancy has 1.115 (COR: 1.115, CI: 0.523-2.377) times less chance to EIBF than more who completed 4 or more than 4 ANC visit. Similarly, 1-4 ANC has 1.024 (COR: 1.024, CI: 0.631-1.662) times less chance to EIBF rather than more than 4 visit during pregnancy.

The mother who didn't receive any breast feeding counseling during pregnancy having 1.034 (COR: 1.034, CI: 0.708-1.509) times less possibility to practice EIBF Alongside those mother who had receive exclusive breastfeeding counseling.

Study result illustrates that, the mother who planned about exclusive breast feeding during pregnancy have 0.919 times (COR: 0.919, CI: 0.617-1.367) more chance to early initiate of breast feeding to their babies than those who didn't plan about EBF.

Normal maternal BMI insist of 1.231 times (COR: 1.231, CI: 0.642-2.36) less chance for initiating breast milk early (within 1 hour after birth) than overweight or obese .Same as, thin has a 1.241 times (COR:1.241, CI: 0.592-2.602) less possibility to EIBF (within 1 hour) than overweight or obese.

Joint family has 0.846 times (COR: 0.846, CI: 0.581-1.234) more chance to practice EIBF to their baby in compared to nuclear family.

According to the result, the lower income (10,000-20,000 tk) families have 0.672 times (COR: 0.672, CI: 0.362-1.250) more chance to EIBF rather than higher income (30,000-above) family. Alongside middle income (21000 -30,000 tk) families having 1.305 times (COR: 1.305, CI: 0.752-2.265) less chance to practice EIBF to their babies compared to higher income family.

The female dominating families having 1.070 times (COR: 1.070, CI: 0.677-1.692) less scope of EIBF practice to their babies after delivery than male dominating family.

Other findings shows that, female babies having 0.828 times (COR: 0.828, CI: 0.568-1.207) more opportunity for EIBF than male babies.

In Accordance with the study result, we finds that, 1st baby has 1.049 times (COR: 1.049, CI: 0.573-1.923) less possibility than 3rd or more over baby. Similarly, 2nd baby also has 1.103 times (COR: 1.103, CI: 0.588-2.068) less chance to practice EIBF than 3rd or over.

Rather than home delivery, facility delivery having 1.822 times (COR: 1.822, CI: 1.235-2.685) ($p < 0.001$) less chance for initiating early breast feeding (within 1 hour after birth).

The mothers who have experienced caesarean section delivery having 2.918 times (COR: 2.918 CI: 1.942-4.383) less copes to early initiate their babies than caesarean section experienced mothers.

The mothers who had received post-natal care service after delivery having 0.618 times (COR: 0.618, CI: 0.422- 0.905) more chance of EIBF than those mother who didn't receive post-natal care service.

The babies who did pre lacteal feeding compared to those who did not feeding any pre lacteal food having 0.047 times (COR: 0.047, CI: 0.29-0.76) more feasibility to EIBF ($p < 0.001$).

The babies who have no colostrum feeding history having 16.428 times (COR: 16.428, CI: 9.049 -29.823) less possibility to EIBF rather than colostrum feeding baby ($p < 0.001$).

Table.4: Determinants of failure of Early Initiation of Breast Feeding of the mothers.

Variables	Adjusted OR	95% CI		P value
		Lower limit	Upper limit	
Age of the Mother				
18-25	Reference			
26-30	2.448	.652	9.190	.185
31 -45	3.927	1.183	13.038	.025

Maternal education				
Illiterate	6.864	1.109	42.490	.038
Primary	1.291	.695	2.396	.419
Secondary or Above	Reference			
ANC visit during pregnancy				
No ANC	.964	.253	3.670	.957
1-4 ANC	1.393	.652	2.977	.392
More than 4 ANC	Reference			
Counsel on EBF during ANC visit				
No	1.196	.640	2.236	.575
Yes	Reference			
Maternal BMI				
Normal	1.371	.562	3.345	.487
Thin	1.584	.533	4.705	.408
Overweight or obese	Reference			
Type of family				
Joint	1.004	.566	1.780	.989
Nuclear	Reference			
Monthly household income (BDT)				
10000-20000	.523	.184	1.487	.224
21000-30000	1.408	.568	3.488	.460
30000 or above	Reference			
Head of the family				
Male	.857	.424	1.729	.666
Female	Reference			
Gender of baby				
Male	Reference			
Female	1.234	.692	2.200	.476
Birth order (Reference child)				
1 st baby	.893	.275	2.898	.850
2 nd baby	.631	.214	1.858	.403
3 rd or over	Reference			

Place of delivery				
Home delivery	reference			
Facility delivery	.784	.386	1.589	.499
Mode of delivery				
Normal vaginal delivery	Reference			
Caesarean section	.708	.328	1.531	.380
Received postnatal care service				
No	1.287	.659	2.513	.459
Yes	Reference			
Pre lacteal feed				
No	Reference			
Yes	.060	.033	.110	<0.001
Colostrum feeding				
No	8.963	4.297	18.696	<0.001
Yes	Reference			

In Table no 4, After Adjusting all variables in bivariate analysis were exported in the logistic regression model to assess the association between early initiations of breast feeding (EIBF). We observed the significant result only in the age of the mother where 25 to 20 age (AOR: 3.927, 95% CI 0.652-9.190), 31-45 years of age (AOR: 3.927, 95% CI 1.183-13.038), found higher likelihoods of not practicing EIBF than 18 to 25 years age of the mother.

In educational level of the mother where illiterate mother (AOR: 6.864, 95% CI, 1.109-42.490), primary educated mother (AOR: 1.291, 95%CI, 0.695-2.396) found higher odds of not practicing EIBF than secondary or above educated mother.

In pre lacteal feeding, mother who had a history of pre lacteal feeding (AOR: 0.60, 95% CI, 0.033-0.110, $p < 0.001$) found less chance of practicing EIBF than the mother who didn't have a history of pre lacteal feeding and the baby who didn't have a colostrum feeding history (AOR: 8.963, 95% CI, 4.297-18.696, $p < 0.001$) found higher likelihoods of not practicing EIBF than those babies who had a colostrum feeding history.

Discussion

Before doing this study, we found lots of similar study about breast feeding practice or exclusive breast feeding or benefits of feeding breast milk but in our study we tried to find out the the determinants of delayed initiation of breastfeeding among 452 garments working mother. We select this study subject because previous study reported that factory related occupations having negative effect to the mothers to continue breast feeding of their child [48]. In this study dependent variable is Early initiation of breast feeding and independent variables are socio demographic history of mothers like age, religion, maternal education, income, types of family, Head of family, Maternal BMI, babies age, gender, immunization status, order of baby, mode and place of delivery, pre lacteal feeding, colostrum feeding etc. we know Breast milk is very essential for the baby whose age less than 6 moths which helps to survive, their growth and brain development, prevent the triple burden of malnutrition, protect from infectious diseases, reduce mortality and fulfil their feeding demand [49,50,51,52]. Besides, the babies usefulness breast milk also helps to maintain birth spacing by releasing hormones, prevent ovulation and leading to lactation amenorrhoea to the mother [49-53]. Breast feeding also helps to protect the mother against chronic diseases, including breast and ovarian cancers, type 2 diabetes, cardiovascular disease and reducing the risk of obesity [49-53]. Breast milk at a time support to the mother and baby and also doing sustainable work in the wider society with strong economic benefits [54]. Although lots of benefits, in this present study, we found that only 40% initiated breast feeding within 1 hour after delivery where similar study reported that in 2019, EIBF rate in Bangladesh was 51% [55]. If we focus on internationally, we notify that in Guatemala 76% (2017) [56], Ethiopia 75.4% (2019) [57] , Northern Uganda 48.2% (2017) [58], Saudi Arabia 43.6% (2019)[59] , Andhra Pradesh 75.6% (2019) [60], Kathmandu 47.3% (2019) [61] , Maharashtra 45.2% (2020) [62], Tamil Nadu 97.5% (2012) [63] and North western Romania 24.3% (2019) [64] having history of EIBF within 1 hour just after birth of the baby. The great diversity in EIBF rates may occur due to different social, cultural and ethnographic factors in breastfeeding practice in different countries.

In this present study, we explain the overall results of the study subject which is related with the early initiation of breast feeding. In between the total number of population, we noticed that the proportion of maternal age was related with the early initiation of EIBF where

younger mother (18-25years) was more initiating breast milk within 1 hour than the aged mother. Age is a significant variable where 25 to 20 age (AOR: 3.927, 95% CI 0.652-9.190), 31-45 years of age (AOR: 3.927, 95% CI 1.183-13.038) found higher likelihoods of not practicing EIBF than 18 to 25 years age of the mother. From one of the different study we found that older women in India (≥ 35 years) were less likely to initiate breastfeeding early than younger women [65]. Another significant variable in this study is maternal education which played on a vital role in the early initiation of breast feeding. More educated mother having more chance to initiate breast feeding early. Survey report shows that 47.5% mothers who completed secondary or above level having initiation of early breast feeding. illiterate mother (AOR: 6.864, 95% CI, 1.109-42.490), primary educated mother (AOR: 1.291, 95%CI, 0.695-2.396) found higher odds of not practicing EIBF than secondary or above educated mother EIBF tendency is poorer in Hindu mother than the Muslim mothers. About 59.1% Muslim mother have a history of EIBF. Result also shows that the percentage of delayed initiation of breast feeding tendency is much more those mothers (61.9%) who were not receiving ANC service. More ANC visit having more early initiation of breast feeding where we observed that the mother who had a history of No ANC during Pregnancy has 1.115 (COR: 1.115, CI: 0.523-2.377) times less chance to EIBF than more who completed 4 or more than 4 ANC visit. Similarly, 1-4 ANC has 1.024 (COR: 1.024, CI: 0.631-1.662) times less chance to EIBF rather than more than 4 visit during pregnancy.

Another result shows that, mother who had a history of pre lacteal feeding to their child they didn't have a history of early initiation of breast feeding to their baby just after birth. Pre lacteal feeding history also has a crucial role in EIBF. After adjusting logistic regression, report notify that In pre lacteal feeding, mother who had a history of pre lacteal feeding (aOR: 0.60, 95% CI, 0.033-0.110, $p < 0.001$) found less chance of practicing EIBF than the mother who didn't have a history of pre lacteal feeding. Other side, baby who are used to feeding pre lacteal food they have less chance to feed colostrum and similar study reports that caesarean section deliver is responsible for in these incidents [66]. In this current study, result shows that about 91.8% mothers having delayed initiation of EIBF due to no colostrum feeding practice to their baby after birth and through adjust OR report, we obtain that the baby who didn't have a colostrum feeding history (AOR: 8.963, (95% CI, 4.297-18.696, $p < 0.001$) found higher likelihoods of not practicing EIBF than those babies who had a colostrum feeding. So, we can say that, poor colostrum feeding is inversely proportionate to the increasing the delayed initiation of breast feeding.

According to the pre lacteal and colostrum feeding consequence of this study, we can say that In many respect, mode of delivery can be responsible for EIBF practice because . Mothers who had delivered their baby through caesarean section were found to be associated with delay in initiation of breastfeeding [67,68]. In this recent study, we observe that About 65.4% mother's having delayed initiation of breast feeding who had an history of facility delivery and 74.3% of mothers who experienced C-Section delivery were initiated breastfeeding within the first hour after delivery compared to 50.2% of mothers who delivered through NVD either at home or hospital. So, the Result shows that the facility delivery having 1.822 times (COR: 1.822, CI: 1.235-2.685) ($p < 0.001$) less chance for initiating early breast feeding (within 1 hour after birth) than home delivery. This study represent that, the higher proportionate of infant's early breastfeeding rate depends on normal vaginal delivery .Similar research reported after caesarean section delivery, women faced lot of problem like maternal lassitude, post-operative observation who delivered via also had more problems like latching, failure of proper positioning due to post-operative pain and insufficient breast milk due to reduced oxytocin release followed by anaesthesia [69] Similar opinion have been also noted that in Ethiopia, Nigeria, India, Brazil as well as in Tanzania women who had caesarean section, had delay initiation of breastfeeding compared to those with vaginal delivery [71,72]. In India, EIBF rate around 31.8% after caesarean section [73].

In short, According to our study result, we clear that our subject (ready-made garments factory worker) and their socio demographic history like education, religion, income, age, family history, delivery history, baby's history, their physical fitness, their working environment, lack of counselling all are more or less responsible for initiation of early breast feeding just after delivery of the baby. If we want to increase EIBF practice we need to increase women's education level, ensure their physical fitness, confirm more awareness or counselling to the mother who are working in the factory through their internal physician in the factory premises during their pregnancy or outsider doctor or health worker or NGO where they treated, try to reduce unnecessary C-section, immediately after C-section by healthcare professionals who assist in mother's recovery helps to trained about the different breastfeeding positions, and practice and initiate early breast feeding through maternal infant skin-to-skin contact practices (breast-crawl) that proven to have a major impact on EIBF even in caesarean deliveries.[74]. This also requires, appropriate guidelines and policy regarding the caesarean delivery at the healthcare centre to improve the EIBF. Through ensuring mental support and counselling, maintaining proper diet providing lactation kit for pumping and

storing milk, breastfeeding breaks to the mother during post natal period, Family members also encourage them to initiate early breast feeding. A strong mother there is no doubt about it that a healthy educated working mother and her surroundings plays a crucial role to initiate early breast feeding .so if we improve EIBF we need to improve those entire factor.

Limitations

Our study is conducted only 4 ready-made garments factory in Gazipur area. We couldn't cover up all the garments factories in Bangladesh and couldn't elaborate our sample size during study period due to our shortness of time and limitation of fund. We received information from mother after re-joining from maternity leave. If the data was recorded within 24 hours or 1 day after delivery bias may be minimized. Due to cross sectional study we could not draw a causal association.

Recommendation

It is clear from the whole study that if it is possible to take some action against delayed initiation of breast feeding, it may reduce. For an example-

- Increasing women education level and knowledge about their reproductive health and their maternity and lactating period.
- Increasing early breastfeeding initiation to the mothers predominantly who had caesarean sections to enable early skin-to-skin contact.
- Conducting breast feeding awareness and counselling program among the factory premises by their internal physician or nurse or health service provider or NGO.
- Management team like welfare officer, compliance team can also encourage the pregnant mother during their monthly meeting or during maternity leave.
- Benefits of breast feeding can be published through Social media, bill board, TV, radio and minimizing the pre lacteal food advertisement.

This process may ultimately lead to build a healthy nation in future.

Conclusion

In this study, structured questionnaire and data collection by a single investigator throughout the study is used which is the significant solidity. Collection of data through structured questionnaire helps to minimize the maternal bias. Before this study, maximum study is done about exclusive breast feeding, proper breast feeding practice related those are conducted in different community but in this study, at a time try to focus on the root cause of delayed initiation and the vulnerable women (RMG working mother). Main theme in this study to find out the barriers of early initiation of breastfeeding among RMG working mothers and how to minimize this problem. At the time of this study, report shows that less than half of mother practice EIBF which is alarming for our future generation. Majority of the mother's opinions that they are get used to their baby with other food at the beginning besides breast milk due to come back to work place after maternity leave. More or less we know that RMG sector maintain tight schedule. Although, now a days maximum factory maintain ILO law but production pressure discourage them to practice EIBF. To ensure healthy outcomes in future, it's necessary to promote and enforce early initiation of breastfeeding among lactating mother who work in a RMG factory through proper counseling and awareness program during ANC and PNC, giving them a Friendly work environment or giving mental support when needed and it may minimize these barriers.

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Reference

1. Breastfeeding (Ninth Edition), A Guide for the Medical Profession, 2022, Pages 247-277 (8-Maternal Nutrition and Supplements for Mother and Infant)
<https://doi.org/10.1016/B978-0-323-68013-4.00008-0>
2. Breastfeeding (Ninth Edition),A Guide for the Medical Profession,2022, Pages 93-144 (4 - Biochemistry of Human Milk),Ruth A. Lawrence
<https://doi.org/10.1016/B978-0-323-68013-4.00004-3>
3. UNICEF, Breastfeeding acts as a baby’s first vaccine, providing critical protection from diseases and death” - 02 August 2021
4. Kiran Bala,¹ Bhavna Sahni,¹ Shalli Bavoria,¹ and Akash Narangyal² Knowledge, attitude, and breast-feeding practices of postnatal mothers in Jammu: A community hospital based cross sectional study, J Family Med Prim Care, 2020 Jul; 9(7): 3433–3437.Published online 2020 Jul 30. doi: 10.4103/jfmprc.jfmprc_333_20
5. UNICEF, Infant and young child feeding, 9 June 2021
<https://www.who.int/news-room/fact-sheets/detail/infant-and-young-child-feeding#:~:text=young%20child%20feeding-,Infant%20and%20young%20child%20feeding,-9%20June%202021>
6. UNICEF and WHO. Capture the moment: early initiation of breastfeeding :the best start for every newborn. 2018, https://www.unicef.org/publications/index_102949.html.
7. Int. J. Environ. Res. Exclusive Breastfeeding and Vitamin D Supplementation Public Health 2022, 19(5), 2973;
[https://www.mdpi.com/1660-4601/19/5/2973#:~:text=\(5\)%2C%202973%3B-,https%3A//doi.org/10.3390/ijerph19052973,-Received%3A%2010%20February](https://www.mdpi.com/1660-4601/19/5/2973#:~:text=(5)%2C%202973%3B-,https%3A//doi.org/10.3390/ijerph19052973,-Received%3A%2010%20February)
8. Cost of Breastfeeding,
<https://www.healthline.com/health/cost-of-breastfeeding#:~:text=FINANCIAL%20CHECK%20UP-,Cost%20of%20Breastfeeding,-Breastfeeding%20vs.%20formula>
9. Gideon Asnake Azeze, Kelemu Abebe Gelaw, Natnael Atnafu Gebeyehu, Molalegn Mesele Gesese, and Taklu Marama Mokonnnon Exclusive Breastfeeding Practice and Associated Factors among Mothers in Boditi Town, Wolaita Zone, Southern Ethiopia, 2018: A Community-Based Cross-Sectional Study, Published online 2019 Jan 1. doi: 10.1155/2019/1483024

10. UNICEF/WHO, “Indicators for assessing infant and young child feeding practices, part 3. Country profiles,” 2010, Indicators part III country profiles.pdf
<http://www.unicef.org/nutrition/files/IYCF>.
11. UNICEF, “A conceptual framework and research approach for identifying, analyzing and prioritizing barriers to effective maternal, newborn and child health interventions 2011”.
Innovations-Conceptual-Framework low res.
<http://innovationsformnch.org/uploads/publications/2011-01>
12. USAID. MCSP nutrition brief - addressing barriers to exclusive breastfeeding: evidence and program considerations for low- and middle-income countries: 2017. www.mcsprogram.org.
13. National Statistical Office (NSO) [Malawi], ICF. Malawi demographic and health survey 2015–16. Zomba and Rockville: NSO and ICF; 2017.
14. National Institute of Population Research and Training (NIPORT), and MaA International I: 2015, . Bangladesh demographic and health survey 2014: key indicators. 2015.
15. Tamanna T, Antora HA, Rahman A. Relationship between child nutritional status with diarrhea and feeding practice. Dhaka: University of Dhaka, 2007.
16. Sinha B, Chowdhury R, Sankar MJ, Martines J, Taneja S, Mazumder S, Rollins N, Bahl R, Bhandari N. Interventions to improve breastfeeding outcomes: a systematic review and meta-analysis. *Acta Paediatr.* 2015; 104(S467):114–34.
17. Sundaram ME, Labrique AB, Mehra S, Ali H, Shamim AA, Klemm RD, West KP, Christian P. Early neonatal feeding is common and associated with subsequent breastfeeding behavior in rural Bangladesh. *J Nutr.* 2013; 143(7):1161–7.
18. Kim MJ, Kim YM, Yoo JH. Factors affecting exclusive breast-feeding during the first 6 months in Korea. *Pediatrics international: official journal of the Japan Pediatric Society.* 2013; 55 (2):177–80.
19. Sasaki Y, Ali M, Kakimoto K, Saroeun O, Kanal K, Kuroiwa C. Predictors of exclusive breast-feeding in early infancy: a survey report from Phnom Penh, Cambodia. *J Pediatr Nurs.* 2010; 5 (6):463–9.
20. Progress on breastfeeding in Bangladesh undermined by aggressive formula milk marketing – WHO, UNICEF GENEVA/NEW YORK/DHAKA, 23 February 2022
21. Betrán AP, Ye J, Moller A-B, Zhang J, Gülmezoglu AM, Torloni MR. The increasing trend in caesarean section rates: global, regional and national estimates: 1990-2014. *PLoS One.* 2016;11(2):e0148343
22. WHO and, UNICEF. Capture the Moment – Early initiation of breastfeeding: The best start for every newborn. New York. 2018.

23. World Health Organization (WHO). Breastfeeding [Internet]. Geneva (Switzerland): WHO; c2022 [cited 2019 Feb 26]; Available from:
https://www.who.int/health-topics/breastfeeding#tab=tab_2.
24. UNICEF, Breast feeding, 28 Dec, 2022
<https://data.unicef.org/topic/nutrition/breastfeeding/>
25. WHO and, UNICEF. Capture the Moment – Early initiation of breastfeeding: The best start for every newborn. New York. 2018
26. UNICEF. From the first hour of life: making the case for improved infant and young child feeding everywhere 2016 [Available from:
https://www.unicef.org/publications/index_93027.html].
27. UNICEF. Infant and young child feeding. 2018.
28. Ministry of Health Community Development Gender Elderly, and Children, (MoHCDGEC), [Tanzania Mainland], Ministry of Health (MoH) [Zanzibar] National Bureau of Statistics (NBS); Office of the Chief Government Statistician (OCGS) and ICF International,. Tanzania Demographic Health Survey and Malaria Indicator Survey (TDHS-MIS). 2015–16.
29. Liben ML, Yesuf EM. Determinants of early initiation of breastfeeding in Amibara district, northeastern Ethiopia: a community based cross-sectional study. *Int Breastfeed J*. 2016;11(1):7.
30. Sarkar TK, Bhattacharjee S, Mukherjee A, Saha TK, Chakraborty M, Dasgupta S. Early initiation of breast feeding in tribal children. *Int J Commun Med Public Health*. 2016; 3(11):3081–5.
31. Berde AS, Yalcin SS. Determinants of early initiation of breastfeeding in Nigeria: a population-based study using the 2013 demographic and health survey data. *BMC Pregnancy Childbirth*. 2016; 16(1):32.
32. Getnet Gedefaw, Effect of cesarean section on initiation of breast feeding, *PLoS One*. 2020; 15(12): e0244229. Published online 2020 Dec 18. doi: 10.1371/journal.pone.0244229
33. Joshi PC, Angdembe MR, Das SK, Ahmed S, Faruque ASG, Ahmed T. Prevalence of exclusive breastfeeding and associated factors among mothers in rural Bangladesh: a cross-sectional study. *Int Breastfeed J*. 2014; 9(1):7.
34. Betrán AP, Ye J, Moller A-B, Zhang J, Gülmezoglu AM, Torloni MR. The increasing trend in caesarean section rates: global, regional and national estimates: 1990-2014. *PLoS One*. 2016;11(2):e0148343.

35. Hackett KM, Mukta US, Jalal CS, Sellen DW. A qualitative study exploring perceived barriers to infant feeding and caregiving among adolescent girls and young women in rural Bangladesh. *BMC Public Health*. 2015; 15:771.
36. Akram Hossain, Working Environment for Female Employees in Bangladesh Corporate Sector Organizations: An Exploratory Study, June 2016
37. Women in workplace in Bangladesh - IDLC
<https://idlc.com/mbr/article.php?id=203#:~:text=Women's%20participation%20in%20the%20labour,the%20growth%20is%20much%20higher.>
38. Matsuyama A, Karama M, Tanaka J, Kaneko S. Perceptions of caregivers about health and nutritional problems and feeding practices of infants: a qualitative study on exclusive breast-feeding in Kwale, Kenya. *BMC Public Health*. 2013; 13:525.
39. Women workers' ratio in RMG industry on decline, *The Financial Express | First Financial Daily of Bangladesh*
40. *The Daily Star*, Women workforce growing fast, FRIDAY, December 16, 2022
41. Raihan S, Bidisha SH. Female employment stagnation in Bangladesh. The Asia Foundation: Dhaka; 2018. Available from: <http://hdl.handle.net/11540/9434>. Accessed 26 Oct 2019.
42. International Labor Organization. Trade unions in Bangladesh: promoting safe and healthy workplaces in the readymade garment (RMG) sector. Dhaka: ILO; 2018. [Org/wcmsp5/groups/public/-asia/-ro-bangkok/-ilo-dhaka/documents/publication/wcms_615874.pdf](https://www.ilo.org/wcmsp5/groups/public/-asia/-ro-bangkok/-ilo-dhaka/documents/publication/wcms_615874.pdf). Accessed 26 Oct 2019 Available from: <https://www.ilo.org>.
43. United Nations Children's Fund. The ready-made garment sector and children in Bangladesh. November. UNICEF: Dhaka; 2015. Available from: https://www.unicef.org/csr/files/CSR_BANGLADESH_RMG_REPORT.PDF. Accessed 26 Oct 2019
44. Naved R, Rahman T, Willan S, Jewkes R, Gibbs A. Female garment workers' experiences of violence in their homes and workplaces in Bangladesh: a qualitative study. *Soc Sci Med*. 2018; 196:150–7.
45. Akhter S, Rutherford S, Chu C. What makes pregnant workers sick: why, when, where and how? An exploratory study in the ready-made garment industry in Bangladesh. *Reprod Health*. 2017;14:142
46. Akhter S, Rutherford S, Akhter Kumkum F, Bromwich D, Anwar I, Rahman A, et al. Work, gender roles, and health: neglected mental health issues among female workers in the ready-made garment industry in Bangladesh. *Int J Women's Health*. 2017; 9:571–9.

47. Anam RL. Inadequacies and variations of maternity leave policies throughout the world: special focus on Bangladesh. *BRAC Univ J.* 2008;5(1):93–8
48. Raju TN. Continued barriers for breast-feeding in public and the workplace. *J Pediatr.* 2006; 148(5):677–9.
49. Fein SB, Mandal B, Roe BE. Success of strategies for combining employment and breastfeeding. *Pediatrics.* 2008;122(Supplement 2):S56–62
50. WHO. Guideline: protecting, promoting and supporting breastfeeding in facilities providing maternity and newborn services. Geneva: World Health Organization; 2017.
51. Chen J, Xin T, Gaoshan J, Li Q, Zou K, Tan S, et al. The association between works related factors and breastfeeding practices among Chinese working mothers: a mixed-method approach. *Int. Breastfeed J.* 2019; 14:28.
52. CG Victora, R Bahl, AJ Barros, et al. Breast feeding in the 21st century: epidemiology, mechanisms, and lifelong effect *Lancet*, 387 (2016), pp. 475-490
53. L Bode, AS Raman, SH Murch, NC Rollins, JI Gordon Understanding the mother–breast milk–infant “triad” *Science*, 367 (2020), pp. 1070-1072, P Christian, ER Smith, SE Lee, AJ Vargas, AA Bremer, DJ Raiten. The need to study human milk as a biological system. *Am J Clin Nutr*, 113 (2021), pp. 1063-1072
54. NC Rollins, N Bhandari, N Hajeebhoy, et al. Why invest, and what it will take to improve breastfeeding practices? *Lancet*, 387 (2016), pp. 491-504.
55. BL Horta, N Rollins, M Dias, V Garcez, R Pérez-Escamilla. Systematic review and meta-analysis of breastfeeding and later overweight or obesity expands on previous study for World Health Organization. *Acta Paediatr* (2022). Published online June 21.
56. CG Victora, BL Horta, C Loret de Mola, et al. Association between breastfeeding and intelligence, educational attainment, and income at 30 years of age: a prospective birth cohort study from Brazil. *Lancet Glob Health*, 3 (2015), pp. e199-e205.
57. Victora CG, Horta BL, Loret de Mola C et al. Association between breastfeeding and intelligence, educational attainment, and income at 30 years of age: a prospective birth cohort study from Brazil. *Lancet Glob Health.* 2015; 3: e199-e205.
58. Karim F, Billah SM, Chowdhury MAK, Zaka N, Manu A, Arifeen SE, et al. Initiation of breastfeeding within one hour of birth and its determinants among normal vaginal deliveries at primary and secondary health facilities in Bangladesh: a case-observation study. *PLoS One* 2018; 13:e0202508.

59. Atyeo NN, Frank TD, Vail EF, Sperduto WAL, Boyd DL. Early initiation of breastfeeding among maya mothers in the Western Highlands of Guatemala: practices and beliefs. *J Hum Lact* 2017; 3:781-9.
60. Belachew A. Timely initiation of breastfeeding and associated factors among mothers of infant's age 0-6 months old in Bahir Dar City, Northwest, Ethiopia, 2017: a community based cross-sectional study. *Int Breastfeed J* 2019;14:5.
61. Mukunya D, Tumwine JK, Nankabirwa V, Ndeezi G, Odongo I, Tumuhamy J, et al. Factors associated with delayed initiation of breastfeeding: a survey in Northern Uganda. *Glob Health Action* 2017; 10: 1410975.
62. Ahmed AE, Salih OA. Determinants of the early initiation of breastfeeding in the Kingdom of Saudi Arabia. *Int Breastfeed J* 2019; 14:13.
63. Uppiretla SB, Mishra SK, Rachakulla HK. Infant feeding practices among mothers in rural Rajamahendravaram, Andhra Pradesh. *I J Community Med Public Health* 2019; 6:2121-6.
64. Acharya S, Khanal C, Dahal AS, Maharjan M. The determinants of early initiation of breastfeeding practice among mothers attending a tertiary hospital, Kathmandu. *J Nepal Paediatr Soc* 2019; 39:168-73.
65. Jeyakumar A, Jungari S, Nair R, Menon P, Babar P, Bhushan B, et al. Prevalence and determinants of early initiation (EI), exclusive breastfeeding (EBF), and prelacteal feeding among children aged 0-24 months in slums of Pune city, in Maharashtra. *Ecol Food Nutr* 2021; 60: 377-93.
66. Jennifer HG, Muthukumar K. A cross-sectional descriptive study to estimate the prevalence of early initiation and exclusive breast feeding in the rural health training centre of a medical college in Tamilnadu, Southern India. *J Clin Diagnostic Res* 2012; 6:1514-7.
67. Cozma-Petruț A, Badiu-Tișa L, Stanciu O, Filip L, Banc R, Gavrițaș L, et al. Determinants of early initiation of breastfeeding among mothers of children aged less than 24 months in Northwestern Romania. *Nutrients* 2019; 11:2988.
68. Patel A, Badhoniya N, Khadse S, Senarath U, Agho KE, Dibley MJ, et al. Infant and young child feeding indicators and determinants of poor feeding practices in India: secondary data analysis of National Family Health Survey 2005–06. *Food Nutr Bull.* 2010;31(2):314–33
69. Takahashi K, Ganchimeg T, Ota E, Vogel JP, Souza JP, Laopaiboon M, et al. Prevalence of early initiation of breastfeeding and determinants of delayed initiation of breastfeeding: secondary analysis of the WHO global survey. *Sci Rep.* 2017; 7:44868.
70. Lauwers J, Swisher A. *Counseling the Nursing Mother*: Jones & Bartlett Publishers; 2015.

71. UNICEF, Breastfeeding from the first hour of birth, July 3, 2018
<https://www.unicef.org/stories/breastfeeding-first-hour-birth-what-works-and-what-hurts>
72. Amol R Dongre, Early initiation of breastfeeding and factors associated with its delay among mothers at discharge from a single hospital, *Clinical and Experimental Pediatrics* · October 2021 https://www.researchgate.net/publication/355380186_
73. *International Journal of Community Medicine and Public Health*, Spatial prevalence and its contextual determinants of early initiation of breastfeeding in cases of C-section deliveries in India. VOL. 9 NO. 6 (2022): JUNE 2022
74. J. Jenifer Florence Mary Early initiation of breastfeeding and factors associated with its delay among mothers at discharge from a single hospital, Published online 2021 Oct 18. doi: 10.3345/cep.2021.00129