Factors influencing early initiation of breastfeeding among mothers in Rajshahi district, Bangladesh

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Abstract

Background

Early initiation of breastfeeding (EIBF) is referred as providing the breast milk to the newborn within one hour of birth which ensures that the infant receives the colostrum. The aim of this study was to identify the risk factors associated with early initiation of breastfeeding among mothers in Rajshahi district, Bangladesh.

Methods

The data was collected from mothers living in Rajshahi district who had at least one child aged 6–24 months from January to March, 2019. The EIBF was measured by a question to mother, "did you provide your breast milk to your infant within one hour after delivered? Frequency distribution, Chi-square and multivariable binary logistic regression model were utilized in this study for getting prevalence and influential factors of EIBF.

Results

This study revealed that the prevalence of EIBF was 88.4%. Logistic model provided that place of delivery, family monthly income, husbands' education level, mothers' nutritional status, mothers' age, husbands' occupation, getting pregnancy with planning, mothers taking advice regarding the benefit of breastfeeding during their pregnancy were the influential factors of EIBF among mothers in Rajshahi district, Bangladesh.

Conclusions

This study identified several modifiable influential factors of EIBF. The customs, culture and other characteristics are almost same across the country in Bangladesh. These factors could be considered to increase the rate of EIBF among mothers in Bangladesh.

Background

Breastfeeding is considered as one of the most important factors for growth and development of infants. World Health Organization defined breastfeeding as the normal way of providing young infants with the nutrients they for healthy growth and development. Breast milk is the best source of nutrition for newborn which is uniquely tailored to meet all the nutritional needs of human babies for the first six months of life [1]. The nutrient of the breast milk possesses remarkable immunological and anti-inflammatory properties that protect both mothers and children against various infections and diseases [2–4]. Early initiation of breastfeeding or timely initiation of breastfeeding is referred as providing the breast milk to

the newborn infant within one hour of birth which ensures that the infant receives the colostrums [5]. Colostrums, the "first milk" produced by the mothers during the first postpartum days, endowed swith protective antibodies that inevitably act as the first immunization for the infants, fortify their immune defense system and eventually reduce the mortality rate of the neonates [6]. It also contains at least ninety known components including amino acids, minerals and vitamins essential for the growth and development of the newborns [7]. Early initiation of breastfeeding ensures skin-to-skin contact between the mothers and the infants which helps in preventing hypothermia of the new-born baby, establishes the bond between mothers and child, and most importantly boosts the chances of increasing exclusive breastfeeding practice [8]. EIBF also shows a significant protective role to mothers by reducing the risk of postpartum hemorrhage which is a leading cause of maternal mortality.

Prevalence of EIBF is the measure of children born who were put to the breast within one hour of birth [9]. The effective initial breastfeeding coverage has been estimated to avert 13%-15% of deaths among children under five years of age especially in middle and low earnings settings [10]. Some researchers reported that children who received initial breastfeeding are at lower risk of having acute respiratory and gastrointestinal infections compared to children who didn't receive initial breastfeeding [11]. On the other hand, late initiation of breastfeeding increases the risk of morbidity and mortality such as the incident of diarrheal diseases increase by fivefold [12]. Infectious diseases and malnutrition due to poor breastfeeding practice are major causes of infant death in developing countries [12–13].

There are a lot of studies pursued with the early initiation of breastfeeding worldwide [14–16]. In Bangladesh, the trend of practicing early initiation of breastfeeding among the lactating mothers remained mostly unchanged for a long time [17]. It is important to sort out the factors that influence the early initiation of breastfeeding in order to implement strategies and interventions that could speed up the government efforts in improving early initiation of breastfeeding trend among mothers in Bangladesh. More recently, Islam et al. [18] investigated the prevalence and factors associated with early initiation of breastfeeding among Bangladeshi mother using nationally representative sample collected by Bangladesh Demographic and Health Survey-2014 (BDHS-2014). BDHS collected data in 2014, it was passed already 6 years, and some indicators related to early initiation of breastfeeding has been changed in Bangladesh. BDHS-2014 mainly collected information regarding the mortality and fertility including some health related factors from women in reproductive age in Bangladesh; they did not consider all possible influencing factors of early initiation of breastfeeding. It is essential to study on early initiation of breastfeeding among Bangladeshi mothers considering more possible risk factors in order to know the current prevalence and associated factors of this issue. In this study, we considered Rajshahi district as our study area. Bangladesh is a small country, and most of the characteristics among mothers are homogeneous except tribal. The findings will come from the study might be focused all over Bangladesh.

The objective of this study was to determine the prevalence and associated factors of early initiation of breastfeeding among mothers in Rajshahi district, Bangladesh.

Methods

Study area and population: Rajshahi district was the target area of the present study and all mothers who had at least one child (age, 6-24 months) were considered as target population. For this cross sectional study, data was collected from January to March, 2019.

Sample size determination: The required sample size for this study was estimated using the formula: [Please see the supplementary files section to view the formula], where n= the required sample size, p is the proportion of prevalence of early initiation of breastfeeding (here, p= 0.514) and z=1.96 at 95% confidence interval, and d is the margin of error, we considered d=0.05. The prevalence of initiation of breastfeeding (p value) was taken from a previous publication [18]. This formula provided that 384 sample was adequate for our present study. However, 440 samples (15% extra) were considered for the study for allowing some failure cases.

Sampling: Multistage random sampling was utilized for this study. In the first stage, 2 Upazilas were selected randomly from 9 Upazilas in Rajshahi district. In the second stage, 2 unions were selected from each selected Upazilas randomly. Similarly, 1 ward was selected from Rajshahi City Corporation randomly. In the third and final stage, 80 mothers were selected from each selected unions and 120 mothers were selected from ward by randomly. All necessary information was collected from respective ward councilor's office/union parishad. Before, collecting data, we discussed about our research with selected mothers and their husbands/guardians, and written consent had been taken from each mother. Unfortunately, 19 selected mothers did not agree to provide their information, finally 421 mothers' information was analyzed in this study. A self-developed questionnaire was used for collecting information from our selected mothers. The questionnaire was draft, and sent to some experts for taking their opinions/suggestion to improve it. According experts' comments/suggestion the questionnaire was modified and finalized for data collection. The original questionnaire was in English, and the revised questionnaire was translated into Bangla (mother tongue of Bangladesh), and the Bangla questionnaire was checked by two authors. A pilot survey had been done for observing whether there was any lacking or drawback in the questionnaire. We did not get lacking or drawback.

Outcome variable: Early initiation of breastfeeding (EIBF) was considered as the outcome variable in this study. It was measured by a question, "did you provide your breast milk to your infant within one hour after delivered? EIBF was expressed as a dichotomous variable with category 1 for initiation of breastfeeding within one hour (early initiation) and category 0 for initiation of breastfeeding after one hour (late initiation).

Independent variables: Some socio-economic, demographic and anthropometric factors were considered as independent variables for this study. The variables were selected on the basis of previous studies [18-20]. All selected variables, their categories with codes are described in Table 1.

Insert Table 1 about here

Statistical analysis: Frequency distribution (percentage) was used to determine the prevalence of EIBF among mothers in Rajshahi district, Bangladesh. Chi-square tests were conducted to assess the

association between independent variables and the EIBF. Binary multiple logistic regression analysis was used to detect the impact of socio-economic, demographic, anthropometric and behavioral factors on EIBF among mothers in Rajshahi district. We used the magnitude of the standard error (SE) for detecting the multicollinearity problem among the independent variables, if the magnitude of the SE lies between 0.001 and 0.5, it is judged that there is no evidence of multicollinearity [21]. A value of p<0.05 was considered as statistically significant in the analysis. All statistical analyses were performed using SPSS (IBM Version 21).

Results

A total number of 421 samples were selected from mothers having at least one child (age, 6-24 months) in Rajshahi district, Bangladesh to determine the prevalence and associated factors of early initiation of breastfeeding (EIBF).

We found that 88.40% mothers provided their breast milk to their newborns within one hour after delivery (Figure). Out of the total sample population 421 mothers, 42% mothers delivered their child by C-section, and near half of the mothers (47.5%) delivered their child in public hospital. More than 68% mothers were living in low income family (below15000 Taka). By education, 47.7% mothers were primary or uneducated while 11.2% had higher education, and 47.5% of their husbands were primary or uneducated and 14.7% got higher education. Out of samples, 47.3% mother's age at first birth was below 20 years. More than 67% were healthy (normal weight) while 25.7% mothers were under nourished. More than 71% and 82% mothers were living in rural area and nuclear family respectively. 79.33% mothers were 20-29 years old, 98.57% mothers and 55.82% of their husbands were housewife and farmer respectively. More than half of mothers (55.34%) had one child, and 50.36% children were boys. 83.61% mothers got pregnancy with proper planning, and 94.77% mothers took advice during pregnancy regarding the benefit of breastfeeding from health providers (Table 2). Chi-square test provided that mode of delivery, place of delivery, respondents' and their husbands' education level, respondents' nutritional status, monthly family income, respondents' age at first birth, type of residence, mothers' age, mothers' occupation, their husbands' occupation and taking advice regarding the benefit of breastfeeding during pregnancy were significantly associated factors of initial breastfeeding among Rajshahi mothers (Table 2). These factors were considered as independent variables in multivariable binary logistic regression models.

Insert Table 2 about here

Table 3 shows the effect of socio-economic and demographic factors on EIBF among mothers in Rajshahi district, Bangladesh. For this purpose we used multivariable binary logistic regression, the standard error (SE) was utilized for checking the multicollinearity problems among the independent variables, SE showed that there was no evidence of this problems except type of residence due to all rural mothers provided EIFB. This variable could not possible to consider as independent variables in logistic model. The results of this model were interpreted using p-value, adjusted odds ratio (AOR) with 95% confidence interval (CI) for AOR. After adjusting the effect of other variables, logistic model demonstrated

that mothers delivered at private hospital reduced the EIBF rate by 91% compared to home delivered mothers (AOR=0.090, 95% CI:0.010-0.794; p<0.05). The rate of EIBF was decreased by 90.3% and 87.0% among mothers who were living in middle income family (AOR=0.097, 95% CI: 0.030 -0.315; p<0.01) and rich family (AOR=0.130, 95% CI: 0.039-0.437; p<0.01) compared to mothers living in poor income family respectively. We found that the rate of EIBF was reduced by 83.3% among higher educated husbands' wives (AOR=0.167, 95% CI: 0.035 -0.792; p<0.05) compared to primary or uneducated husbands' wives. The nutritional status of mothers was an important predictor of initial breastfeeding, and it was observed that the rate EIBF was diminished by 89.2% and 92.8% among healthy (normal weight) (AOR=0.108, 95% CI: 0.013-0.867; p<0.05) and over nourished mothers (AOR=0.072, 95% CI: 0.008-0.692; p<0.05) compared to under nourished mothers. It was found that the rate of EIBF was 7.133, 3.069 and 7.385 fold higher among mothers aged 20-24 years (AOR=7.133, 95% CI: 2.273-22.381; p<0.01), 25-29 years [AOR=3.069, 95% CI: 1.047-8.997; p<0.05), 30-34 years (AOR=7.385, 95% CI: 1.623-33.607; p<0.01) than mothers aged 35 years and above. Farmers' wives provided their initial breast milk to their infants had 13.568 times (AOR=13.568, 95% CI: 5.237-35.154; p<0.01) higher than others professional husbands' wives. Mothers who got pregnancy with proper planning had provided EIBF 5.941 fold higher (AOR=5.941, 95% CI: 2.237-15.780; p<0.01) than who did not do it. Mothers who took advice regarding the benefit of breastfeeding during their pregnancy had 7.502 times (AOR=7.502, 95% CI: 2.877-19.559; p<0.01) higher to provide EIBF than mothers who did not get it. Hosmer and Lemeshow test demonstrated that our selected model was good fitted, and the model can able to explain the variation of outcome variable by 56.60% (Nagelkerke R^2- value =0.566) (Table 3).

Insert Table 3 about here

Discussion

In the present study, we tried to determine the prevalence of early ignition of breastfeeding (EIBF) and investigate the associated factors of EIBF among mothers living in Rajshahi district, Bangladesh. It was noted that the prevalence of EIBF among mothers in Rajshahi district, Bangladesh was 88.40%. The national survey of Bangladesh showed that 51.0% children were breastfed within one hour after birth (early ignition of breastfeeding) and 89% were breastfed within one day after delivery, and 55.0% under age 6 months were exclusively breastfed [17]. However, more recently published the key indicators of BDHS 2017–2018 showed that 65% of infants under age 6 months were exclusively breastfed (EB) in 2017, it was a markedly higher level than in 2014, and they did not publish the rate of EIBF [22]. BDHS-2014 found that 98% children who were born in the two years proceeding of their survey were breastfed at some point in their life, breastfeeding was almost universal in Bangladesh [17]. The rate of breastfeeding for every stage has been increasing with increasing the medical facilities in Bangladesh. Mothers can easily get advice regarding the benefit of breastfeeding from health providers or family planning workers; they are working with mothers of reproductive age. Also, it was found that the practices to provide EIBF to new born increased with increasing the literacy rate with awareness on the benefit of early initiation of breastfeeding especially among rural women in Bangladesh [17].

The prevalence of EIBF among mothers in Rajshahi district was also higher than south Asian countries like India (21%) [23], Pakistan (8.5%) [24], other developing countries like Nigeria (34.7%) [25], Iran (32.2%) [26] and South Sudan (48%) [27]. The rate was close to the developing countries Ethiopia which was 83.7% [28].

Mothers who delivered at home were more likely to provide EIBF to their infant than mothers delivered at private hospitals. The present finding coincided with another Chinese study [29]. But our results was not supported by BDHS survey data conducted in 2014 [18] and a study from Nicaragua [30] showing no significant association between EIBF and place of delivery. It was noted that mothers living in poor income were more interested to provide their initial breast milk to their infants than middle incoming family, however BDHS-2014 indicated no significant association between EIBF and wealth index [18].

We found that primary or uneducated husbands' wives had more chance to give their initial breast milk to their infants than higher educated husbands' wives. This finding was supported by another study [31]. They also found that husband's educational level was significantly associated with EIFB.

The nutritional status of mothers was an important predictor of initial breastfeeding, and it was observed that under nourished mothers were more likely to provide their breast milk to their infants than healthy and over nourished mothers, same results had been in our nationally representative samples [18]. Similar observation was also mentioned by several studies [30, 32–34]. This study found that highly reproductive mothers (age, 20–34) had more likely to provide EIBF to their children than mothers aged 35 years and above. Our result was also supported by a global survey [35–36]. Again, in this study, it was found that husband's occupation is an important factor for EIBF, i.e. farmers' wives had higher chance to give EIBF to their children than others professional husbands' wives. Our result was also in line with another study in India [37], but disagreed with other study in Sudan [38].

In this study, we have found that place of delivery, family income, husbands' education level and mothers' nutritional status are important factor for providing initial breast milk to new born among mothers in Rajshahi district. These four factors are very much related each to other in developing country like Bangladesh. Most of the home delivery mothers are living in poor family. In Bangladesh, wife is dominated by her husband, and most of the females are dependent on their husband income, and income is dependent on education level. Usually, uneducated or primary educated husbands are farmer or day labors living in rural or slum area, their income is not sufficient to maintain their family, and they cannot able to provide sufficient food to their family members, consequently, they suffer from under nutrition. Mothers living in poor family cannot able to go hospital/clinic for delivering, most of them delivery at home in presence their close relative without proper nursing. Traditional custom and culture in the society of Bangladesh, after delivery immediately mother wants to provide her breast milk to her new born, it is possible for most of the mothers who delivered by vaginal. It is mentionable that all home deliveries are vaginal. On the other hand, mothers living in middle or rich family, usually they delivery at hospital/clinic with proper nursing but now a days most of the delivery occur by caesarian, after delivery sometimes mothers stay at operating theatre more than one hour, she cannot able to provide their breast milk to their

infant in time (within one hour of delivery). One of the most reasons that mothers living in poor family is more likely to provide their breast milk to their new born than mothers living in rich family, similar results are found in other Bangladeshi study [18]. More number of healthy and over nourished mothers is living in rich family, and most of them underwent caesarean section, it might be higher risk of cephalo-pelvic disproportion and relatively poor progress due to maternal fatigue [39]. This is one of the most important reasons for the differences seen in the practice of EIBF between under nourished and healthy/over nourished mothers. Healthy and over nourished mothers should be the focus of education on the potential benefits of EIBF. We found that mothers got pregnancy with proper planning and took advice regarding the benefit of EIBF were more likely to provide EIBF than their counterparts. Family planning workers who are closely working with pregnancy mothers, and health provided can play a good rule to increase the rate of EIBF and exclusive breastfeeding in Bangladesh.

Strength and limitations of this study

Perhaps, this was first time we attempt to investigate the early initiation of breastfeeding and its influential factors among mothers in Rajshahi district, Bangladesh. We considered two new factors; (i) getting pregnancy with planning and (ii) mothers taking advice regarding the benefit of breastfeeding during their pregnancy, which were not considered in our national survey. However, there are several limitations of our present project. Firstly, in this study we considered only Rajshahi district as our study area which is small part of Bangladesh. Secondly, we used quantitative study which can determine only risk factors but cannot do research in-depth. For complete study, mixed research (qualitative and quantitative) is important. Thirdly, we selected some socio-economic, demographic, anthropometric and behavioral factors as independent variables but other important factors were not considered in this study. On the basis on our limitation, we may proclaim further many more researches will be required on breastfeeding among Bangladeshi mothers.

Conclusions

In this study, we considered 421 mothers living in Rajshahi district, Bangladesh having at least one child aged 6-24 months as sample to determine of EIBF and its related factors. Our selected statistical models provided that the rate of EIBF among mothers in Rajshahi district was 88.40%; the predictors of EIBF were: place of delivery, family monthly income, husbands' education level and occupations, mothers' nutritional status, mothers' age, get pregnancy with proper planning and taking advice regarding the benefit of EIBF. These findings would help to the health authorities of Bangladesh government and non-government organization who are working with mothers and children health and nutrition for improving their strategic to increase the rate of EIBF.

Abbreviations

AOR- Adjusted Odds Ratio; BDHS- Bangladesh Demographic and Health Survey; EB- Exclusively breastfed; EIBF-Early initiation of breastfeeding; IBM- International Business Machines; SE- Standard error; SPSS-

Statistical Package for the Social Sciences.

Declarations

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Tables

Table 1: Independent variables, their categories and codes

Variable	Category	Code	Variable	Category	Code
Mode of delivery	Caesarean	1	**Husbands' education level**	Uneducated or primary	1
	Vaginal	2		Secondary	2
Place of delivery	Home	1		Higher	3
	Public	2	**Age at first birth (year)**	<20	1
	Private	3		≥20	2
Monthly family income (Taka)	<15000	1	**Mothers' nutritional status**	Under nutrition	1
	15000-25000	2		Healthy (normal weight)	2
	>25000	3		Over nutrition	3
Mothers' education level	Uneducated or primary	1	**Type of family**	Nuclear	1
	Secondary	2		Joint	2
	Higher	3	**Type of residence**	Urban	1
Mothers' age (year)	15-19	1		Rural	2
	20-24	2	**Gender of children**	Boy	1
	25-29	3		Girl	2
	30-34	4			
	35 and above	5			

Table 2: Association between early initial breastfeeding and socio-economic, demographic and anthropometric factors

Variable	Group, N(%)	Early initiation of breastfeeding status		Chi-square/ Fisher's exact value	p-value
		No, N(%)	Yes, N(%)		
Mode of delivery	Cesarean, 177(42)	33(18.6)	144(81.4)	14.572	p<0.001
	Vaginal, 244(58)	16(6.6)	228(93.4)		
Place of delivery	Home, 45(10.7)	1(2.2)	44(97.8)	31.936	p<0.001
	Public, 200(47.5)	9(4.5)	191(95.5)		
	Private, 176(41.8)	39(22.2)	137(77.8)		
Monthly family income (Taka)	<15000, 287(68.2)	6(2.1)	280(97.9)	85.918	p<0.001
	15000-25000, 58(13.8)	14(24.1)	44(75.9)		
	>25000, 76(18.0)	29(38.2)	47(61.8)		
Mothers' education level	Uneducated or primary, 201(47.7)	10(5.0)	191(95.0)	25.061	p<0.001
	Secondary, 173(41.1)	25(14.5)	148(85.5)		
	Higher, 47(11.2)	14(29.8)	33(70.2)		
Husbands' education level	Uneducated or primary, 200(47.5)	8(4.0)	192(96.0)	61.333	p<0.001
	Secondary, 159(37.8)	16(10.1)	143(89.9)		
	Higher, 62(14.7)	25(40.3)	37(59.7)		
Age at first birth (year)	<20, 199(47.3)	14(7.0)	185(93.0)	7.777	0.005
	≥20, 222(52.7)	35(15.8)	187(84.2)		
Mothers' nutritional status	Under nutrition, 08(25.7)	1(0.9)	107(99.1)	28.629	p<0.001
	Healthy (normal weight), 85(67.7)	38(13.3)	247(86.7)		
	Over nutrition, 28(6.6)	10(35.7)	18(64.3)		
Type of family	Nuclear, 346(82.19)	36(10.4)	310(89.6)	2.877	0.090
	Joint, 75(17.81)	13(17.3)	62(82.7)		
Type of residence	Urban, 122(28.98)	49(40.2)	73(59.8)	135.908	p<0.001
	Rural, 299(71.02)	0(0)	299(100)		
Mothers' age (year)	15-19, 17(4.04)	9(52.9)	8(47.1)	42.936	p<0.001
	20-24, 181(42.99)	11(6.1)	170(93.9)		
	25-29, 153(36.34)	20(13.1)	133(86.9)		
	30-34, 51(12.11)	3(5.9)	48(94.1)		
	35 and above, 19(4.52)	6(31.6)	13(68.4)		
Gender of children	Boy, 212(50.36)	21(9.9)	191(90.1)	1.248	0.264
	Girl, 209(49.64)	28(13.4)	181(86.6)		
Mothers' occupation	House wife, 415(98.57)	46(11.1)	369(88.9)	8.709	0.023
	Others, 6(1.43)	3(50.0)	3(50.0)		
Husbands' occupation	Farmer, 235(55.82)	5(2.1)	230(97.9)	46.789	p<0.001
	Others, 186(44.18)				

		44(23.7)	142(76.3)		
Number of children	One, 233 (55.34)	22(9.4)	211(90.6)	2.449	0.118
	More than one, 188(44.66)	27(14.4)	161(85.6)		
Planning of conception	Yes, 352(83.60)	37(10.5)	315(89.5)	2.655	0.103
	No, 69(16.40)	12(17.4)	57(82.6)		
Taking advice during pregnancy	Yes, 399 (94.77)	39(9.8)	360(90.2)	25.810	p<0.0001
	No, 22(5.23)	10(45.5)	12(54.5)		

Table 3: Effect of socio-economic and demographic factors on initial breastfeeding among mothers in Rajshahi district, Bangladesh

| Variable with groups	B	SE	Wald	p-value	AOR	95% CI for AOR Lower	Upper
Mode of delivery (Caesarean Vs Vaginal[R])	-1.183	0.323	13.450	0.001	0.306	0.163	0.576
Place of delivery			10.031	0.007			
Public Hospital Vs Home[R]	-1.024	1.126	0.827	0.363	0.359	0.040	3.263
Private Hospital Vs Home[R]	-2.405	1.109	4.698	0.030	0.090	0.010	0.794
Monthly family income (Taka)			16.443	0.000			
15000-25000 Vs ≤15000[R]	-2.330	0.600	15.074	0.000	0.097	0.030	0.315
≥25000 Vs ≤15000[R]	-2.042	0.620	10.864	0.001	0.130	0.039	0.437
Husbands' education level			6.323	0.042			
Secondary Vs Primary or Uneducated[R]	-0.463	0.669	0.480	0.489	0.629	0.170	2.335
Higher Vs Primary or Uneducated[R]	-1.792	0.796	5.074	0.024	0.167	0.035	0.792
Mothers, education level			4.474	0.107			
Secondary Vs Primary or Uneducated[R]	-0.031	0.625	0.003	0.960	0.969	0.285	3.296
Higher Vs Primary or Uneducated[R]	1.297	0.812	2.548	0.110	3.658	0.744	17.981
Mothers' age at first birth (year) (>20 Vs ≥20[R])	0.262	0.448	0.341	0.559	1.299	0.540	3.125
Mothers' nutritional status			5.208	0.074			
Healthy Vs under nutrition[R]	-2.227	1.064	4.383	0.036	0.108	0.013	0.867
Over nutrition Vs under nutrition[R]	-2.630	1.154	5.193	0.023	0.072	0.008	0.692
Mothers' age (year)			31.742	p<0.001			
15-19 Vs 35 and above[R]	-0.891	0.693	1.655	0.198	0.410	0.106	1.594
20-24 Vs 35 and above[R]	1.965	0.583	11.341	p<0.001	7.133	2.273	22.381
25-29 Vs 35 and above[R]	1.121	0.549	4.177	0.041	3.069	1.047	8.997
30-34 Vs 35 and above[R]	1.999	0.773	6.688	0.010	7.385	1.623	33.607
Mothers' occupation, (House wife Vs Others[R])	1.221	.836	2.135	0.144	3.390	0.659	17.438
Husbands' occupation, Farmer Vs Others[R]	2.608	0.486	28.823	p<0.001	13.568	5.237	35.154
Planning concept, Yes Vs No[R]	1.782	0.498	12.780	p<0.001	5.941	2.237	15.780
Taking advice, Yes Vs No[R]	2.015	0.489	16.986	p<0.001	7.502	2.877	19.559
Constant	7.601	1.548	24.110	p<0.001	2000.883		
Nagelkerke R^2- value =0.566							
Hosmer and Lemeshow Test		Chi-sauare value=5.568		p-value=0.696			

Figures
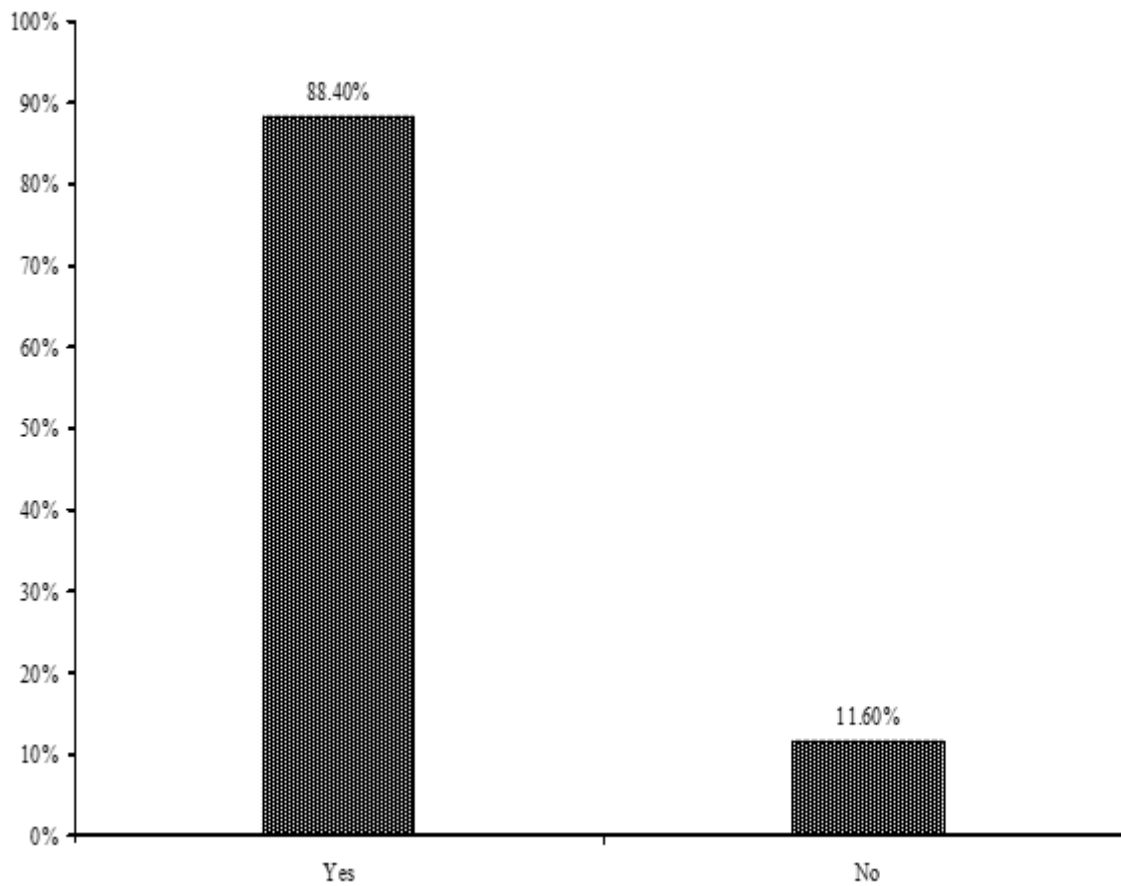
Figure 1

Prevalence of initial breastfeeding among mothers in Rajshahi district, Bangladesh

Supplementary Files

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- supplement1.doc
- MethodswithEquations.docx