

# Infant and young child feeding practices and factors associated with early initiation of breastfeeding in ultra-poor slum population of Bangladesh

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## RATIONALE/OBJECTIVE

Appropriate infant and young child feeding (IYCF), including early initiation of breastfeeding (EIBF), ensures optimal development of children and reduces the likelihood of mortality and morbidity. In Bangladesh, the rate of urbanization is accelerating and cities experiencing constant influx of people in ultra-poor settlements. There is a paucity of IYCF data from the children living in ultra-poor urban slums of Bangladesh.

### Study objectives

- To explore the IYCF practices among mothers of 0-23 months children in the ultra-poor slums of Bangladesh.
- To determine the factors associated with EIBF practices.

## METHODS

### Study design

Cross-sectional study.

### Study area and population

The target population of this study was 0-23 months children and their mothers living in ultra-poor urban slums of Bangladesh. For the study, three areas were selected: Mohammadpur, and Mirpur in the Dhaka district, and Saidpur in the Nilphamari district.

### Sampling technique and sample size

For sampling the cluster sampling technique was applied. Cluster size was similar, but number of clusters allocated to each study site was proportionate to population size. The sample size was 682 mothers and 0-23 months children dyads.

### Data collection tool and procedure

Study tools:

- Household listing tools.
- Interview questionnaire for mothers.

The interview questionnaire included socio-demographic, dietary, healthcare utilization modules. The data were collected through face-to-face interviews at the household level.

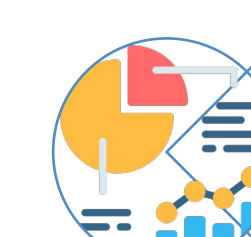
### Quality control

For quality control, observation of 5% of quantitative interviews was carried out, and 5% of the study participants were randomly selected and re-interviewed with a truncated version of the questionnaire.


### Ethical consideration

Ethical approval was taken from Institutional Review Board (IRB) of BRAC James P Grant School of Public Health, BRAC University, Dhaka, Bangladesh. Written informed consent and assent (for less than 18 years adolescent mothers) were taken before starting the interview.

## STATISTICAL ANALYSIS

 Descriptive analysis: Frequency and percent distribution

 Association test: Multivariable logistic regression

 Software used for analysis: STATA version 17.0

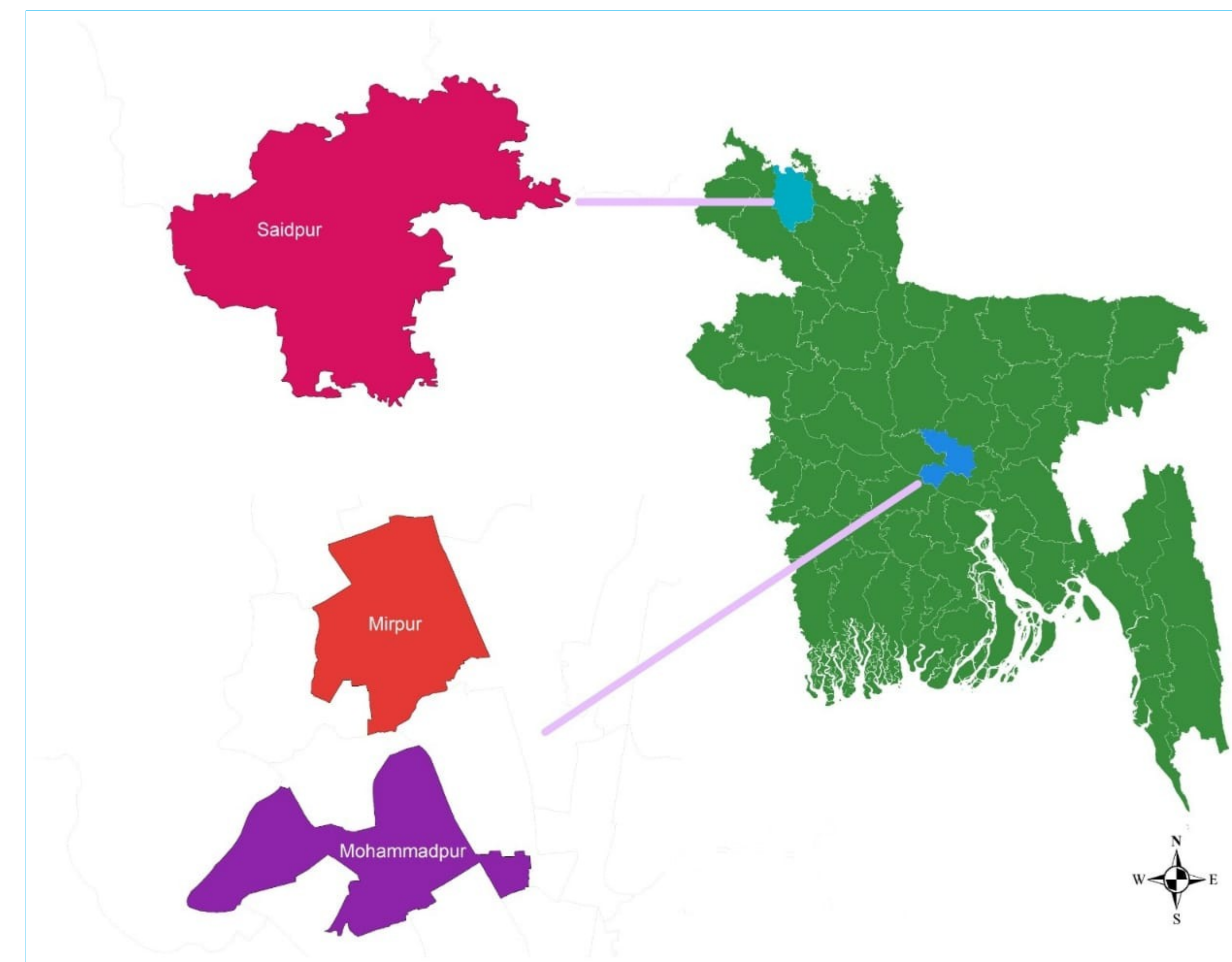


Figure 1: Map of study areas

Table 1: Multivariable association of sociodemographic variables with early initiation of breastfeeding among mothers of 0-23 months old children

Sociodemographic variables	Crude odds ratio (cOR) (95% CI)	Adjusted odds ratio (aOR) (95%CI)
<b>Sex of the child</b>		
Male	Ref	Ref
Female	0.85 (0.52,1.39)	0.78 (0.46,1.32)
<b>Child age (months)</b>		
0-5	Ref	Ref
6-11	1.66 (0.83,3.34)	1.87 (0.89,3.92)
12-23	1.10 (0.62,1.95)	1.08 (0.58,2.02)
<b>Mother's age (years)</b>		
≤ 19	Ref	Ref
20-29	0.66 (0.30,1.45)	0.45 (0.19,1.08)
≥ 30	0.70 (0.29,1.69)	0.35 (0.12,1.02)
<b>Maternal education</b>		
No education	Ref	Ref
Primary (Grade 1-5)	0.47 (0.22,1.02)	0.45 (0.21,1.01)
Secondary and above (≥ Grade 6 and above)	0.26 (0.13,0.54) *	0.28 (0.13,0.59) *
<b>Maternal occupation</b>		
Homemaker	1.00 (0.48,2.10)	0.89 (0.39,2.06)
Others†	Ref	Ref
<b>Number of live births</b>		
1 live birth	Ref	Ref
2 or more live births	1.74 (1.06,2.84) *	2.46 (1.34,4.49) *
<b>Number of ANC checkups</b>		
No ANC visit	Ref	Ref
1-3 ANC visits	1.17 (0.33,4.19)	1.22 (0.25,6.01)
≥4 ANC visits	1.07 (0.31,3.72)	1.74 (0.36, 8.50)
<b>Number of PNC checkups (within 42 days after birth)</b>		
No PNC visit	Ref	Ref
1-3 PNC visits	1.30 (0.63,2.65)	1.41 (0.66,2.99)
≥4 PNC visits	0.50 (0.27,0.92)*	0.73 (0.37,1.44)
<b>Place of delivery</b>		
Home delivery	Ref	Ref
Institutional delivery	0.32 (0.10,1.04)	0.52 (0.10,2.66)
<b>Type of delivery assistant</b>		
Medically trained provider††	Ref	Ref
Non-medically trained provider	2.86 (1.02,8.04) *	0.99 (0.24,4.17)
<b>Mode of delivery</b>		
Vaginal delivery	Ref	Ref
Cesarean section	0.34 (0.19,0.58) *	0.37 (0.19,0.72) *
<b>Wealth quintiles</b>		
Poorest	Ref	Ref
Poorer	0.99 (0.48,2.03)	1.06 (0.49,2.30)
Middle	1.78 (0.79,4.05)	2.11 (0.87,5.14)
Richer	0.99 (0.48,2.03)	0.98 (0.46,2.11)
Richest	1.61 (0.72,3.58)	1.74 (0.74,4.08)

†Others- all other categories.

††Medically trained provider- qualified doctors, nurses/midwife/paramedic, FWV, CSBA, SACMO.

\*p value was significant at <0.05.

## RESULTS

### Prevalence of IYCF practices

We found that 99.3% of children were ever breastfed; 89.4% of women breastfed their newborn child within an hour; 63.5% of 0-6 months old children were exclusively breastfed; 70.8% of mothers gave their 6-8 months old children solid, semi-solid, or soft foods; and 34.2% of 0-23 months old children were bottle fed (Figure: 2).

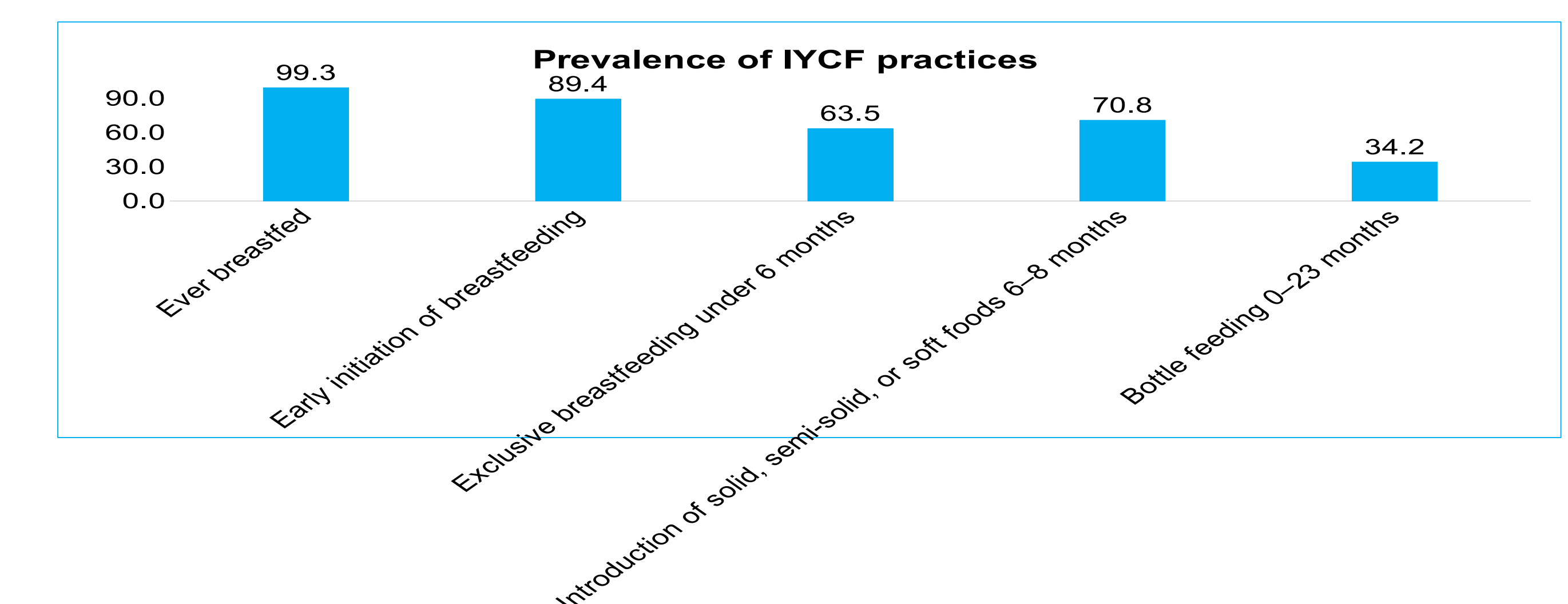


Figure 2: Prevalence of IYCF practices among mothers of 0-23 months children; ever breastfed (n=681), early initiation of breastfeeding (n=682), exclusive breastfeeding under 6 months (n=170), introduction of solid, semi-solid, or soft foods 6-8 months (n=72), bottle feeding 0-23 months (n=681).

### Factors associated with EIBF

In the unadjusted analysis, maternal education, number of live births, number of PNC check-ups, type of delivery assistant, and mode of delivery were significantly associated with EIBF.

In adjusted analysis, maternal education secondary or above (≥ grade 6) (aOR = 0.28, 95% CI = 0.13,0.59, p = 0.001), previous history of two or more live births (aOR = 2.46, 95% CI = 1.34,4.49, p = 0.003), and cesarean delivery of index child (aOR = 0.37, 95% CI = 0.19, 0.72, p = 0.003) were significantly associated with EIBF (Table: 1).

## IMPLICATIONS

Exclusive breastfeeding needs further enhancement and therefore the government and other stakeholders should design and implement exclusive breastfeeding program in the urban slums of Bangladesh.

There should also be culturally appropriate interventions to reduce bottle-feeding. Introduction of solid, semi-solid and soft foods for 6-8 months children needs further improvement.

Unnecessary cesarean sections should be stopped to improve EIBF.