



## A STUDY ON COLOSTRUM AND EXCLUSIVE BREAST FEEDING PRACTICES AND ITS DETERMINANTS IN RURAL MOTHERS OF KATI HAR, BIHAR.

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### ABSTRACT

Breastfeeding, also known as nursing, is the feeding of babies and young children with milk from a woman's breast. Breastfeeding has a number of benefits to both mother and baby, which infant formula lacks. Breastfeeding decreases the risk of respiratory tract infections and diarrhea. Other benefits include lower risks of asthma, food allergies, celiac disease, type 1 diabetes, and leukemia. Breastfeeding may also improve cognitive development and decrease the risk of obesity in adulthood. Benefits for the mother include less blood loss following delivery, better uterus shrinkage, weight loss, and less postpartum depression. Long term benefits for the mother include decreased risk of breast cancer, cardiovascular disease, and rheumatoid arthritis. Breastfeeding is less expensive than infant formula. Colostrum is the first breast milk produced after birth and is important for promotion of health and prevention of infections of the newborn immediately after birth. Though the breastfeeding practices are well known to mothers but the necessity of colostrum feeding is still poorly understood especially by the mothers in rural areas due to various factors. World Health Organization (WHO), recommend breastfeeding exclusively for six months. After the introduction of foods at six months of age, recommendations include continued breastfeeding until at least one to two years of age.

**KEYWORDS :** Breast Feeding, Colostrum feeding, Exclusive Breast Feeding, Determinants

**Background-** According to study done by Silva P, and Alemayehu, T, the colostrum feeding has significant effects for immediate and future health of newborn infants especially in developing countries such as Ethiopia that have high rates of malnutrition, infectious diseases and mortality for children under the age of 5 years.

Mannel R, reported that Exclusive breast-feeding from birth to 6 months of age has prolonged health benefits and emotional bonding for mother and child and is associated with lower infant morbidity and mortality rate, and better growth & development of the baby.

According to a study done by Katak R et al 21% had discarded colostrum whereas in rural areas, 29.5% mothers had discarded colostrum.

According to NFHS-3 Fact sheet Assam, 50.9% of mothers in urban areas were initiated breastfeeding within one hour of birth as compared to 50.5% in rural areas and 64.9% of mothers were exclusively breastfed their babies in urban areas as compared to 44.4% in rural areas. Due to the discrepancies in feeding practices in rural and urban areas the prevalence of underweight were also different among rural and urban children i.e., 42% of children were underweight in rural areas whereas 34.1% in urban areas of Assam, India.

Raina S K et al highlights the myths and misconception of women regarding colostrum feeding. 40% women answered that breast milk is not enough to satisfy the baby, 37% said that gutty is the part of our tradition and better than first milk, 12% women said due to nipple pain they don't like to feed. 6% women said that baby is not able to suck properly and not satisfied and 6% women said that they do not like the colour of colostrum and need to give supplement feeding. We have lower percentage of women who have knowledge on the importance of colostrums compared to few other studies done in this region.

According to a study by Saleh F et al, only 23% mothers were exclusively breastfeeding their children. The reasons for not exclusively breastfeeding the children were lack of knowledge in 26% of the cases; about 17% had no knowledge about the starting age of children for CF; 21% failed to produce enough breastmilk; and 28% were sick during the study period.

Acharya P and Khanal V reported that maternal education was associated with a higher likelihood of early initiation of breastfeeding in each survey. Pooled data analysis revealed higher odds of early initiation of breastfeeding among the mothers with primary education and secondary or higher education. In the most recent NDHS 2011 survey, odds of early initiation of breastfeeding were higher among mothers with primary education and mothers with secondary or higher

education compared to mothers with no education. Similarly, the odds of early initiation of breastfeeding were higher among mothers with secondary and higher education in the 2006 data and in 2001

According to a study done by Bhandari D, Choudhary S K, mother education is associated with exclusive breast feeding practices. The prevalence of exclusive breastfeeding was more among literate mother as comparison to illiterate. The exclusive breast feeding percentage was the highest among mothers educated up to higher secondary (84.1%). The prevalence of exclusive breast feeding was 81.3% among illiterate mothers, 83.9% among just literate, 78.8% among mothers educated up to primary education. The overall prevalence of exclusive breast feeding was 76.6% according to this study. Same study reported that as the education status of mothers increased from illiterate to post graduate the time of initiation of breast feeding within one hour also raised. The time of initiation was only 8.2% among illiterate mothers, 15.6% among just literate, 23.5% among mothers educated up to primary education, 36.5% among educated up to middle school, 23.9% among higher secondary, 29.5% among educated up to graduate and maximum 50.0% among educated up to post graduation. Heck E K et al reported that there was a marked socioeconomic gradient in breastfeeding. Women with higher family incomes, those who had or whose partners had higher education levels, and women who had or whose partners had professional or executive occupations were more likely than their counterparts to breastfeed. After adjustment for many potential confounders, maternal and paternal education remained positively associated with breastfeeding, while income and occupation were no longer significant. Compared with other racial or ethnic groups, foreign-born Latina women were the most likely to breastfeed.

### Objectives-

- 1 To study and assess the breast feeding and weaning practices among mothers in Hazipur, rural field practice area of Katihar Medical College, Katihar.
- 2 To correlate these practices with pertinent socio-demographic factors.

### Material and Method-

The present study "A study on colostrum and exclusive breast feeding practices and its determinants in rural mothers of Katihar, Bihar" had been carried out among all the mothers having infants of age 0-12 months. The study was a community based cross-sectional study. The study was conducted at Hazipur village, a Rural field practice area of Katihar Medical College, Katihar, Bihar situated kms away from Medical college. The total population in this area is approximately 15,000 and birth rate is 2.8%. The population consists mainly of Muslim families. The data for this study was collected from

September 2016 to April 2017. All the mothers belonging to 0-12 months children, in Hajipur village (study population at least 390 in number) will be included in this study.

Appropriate simple random sample of size (n) within 95% confidence limit may be obtained by using the following formula:

$$n = \frac{Z^2 \times P \times Q \times DEFF}{d^2}$$

Where Z = (Value of Z at 95% = 1.96)

P = Prevalence

q = (100-P)

d = Probable error (absolute or relative precision)

DEFF = Design Effect (1 for SRS)

According to various studies the prevalence of breast feeding below children less than 12 month is 50 to 65%. By using 50% anticipated prevalence with 10% relative precision, following sample size was obtained for the study:

$$n = \frac{(1.96)^2 \times 50 \times (100 - 50)}{10\% \text{ of } 50 \times 10\% \text{ of } 50}$$

$$= \frac{3.84 \times 50 \times 50}{5 \times 5}$$

n = 384 = 390 (for ease in calculation and considering the fact that some participants may deny in taking participate)

The information will be collected by interview with pretested and pre designed Performa/ Questionnaire. After obtaining written informed consent from the head of the house hold and establishing good rapport with family, information had been recorded in the pre designed and pre tested Performa / questionnaire. The data thus collected, was first coded and transferred to a master chart from which simple as well as co-relational tables were prepared, analyzed and statistically evaluated.

**Observations-**

**Table-1 Baby Feed On Colostrum**

Baby Feed on colostrum	Number	Percentage
Yes	180	46.15
No	210	53.85
<b>Total</b>	<b>390</b>	<b>100</b>

In this Study, colostrum was given by only 46.15% of mothers. Majority of mothers (53.85%) discarded colostrum due to some reason.

**Table-2 Exclusive Breastfeeding By mother**

Exclusive BF	Number	Percentage
Yes	160	41.03
No	230	58.97
<b>Total</b>	<b>390</b>	<b>100</b>

In this study exclusive breast feeding was done by 41.03% of mothers only.

**Table-3 Mother education status (As per Census of India) and Colostrum Feeding**

Education Status	Total	Yes	Percentage
Illiterate	216	79	36.57%
Just Literate	156	86	55.13%
Primary	5	4	80.00%
Secondary	7	6	85.71%
Higher Secondary and above	6	6	100%
<b>Total</b>	<b>390</b>	<b>180</b>	<b>46.15%</b>

Among mothers educated up to higher secondary and above, 100% practiced exclusive breastfeeding, followed by those upto secondary primary & just literate (85.71%, 80.00% and 55.13%) respectively. Percentage of exclusive breastfeeding was lowest (36.57%) among illiterate mothers. The association between educational status of mothers and colostrum feeding was found significant (P<0.01)

**Table 4 Mother education status and Exclusive breast feeding**

Education Status	Total	Yes	Percentage
Illiterate	216	67	31.02%
Just Literate	156	77	49.36%
Primary	5	4	80.00%

Secondary	7	6	85.71%
Higher Secondary and above	6	6	100%
<b>Total</b>	<b>390</b>	<b>160</b>	<b>41.03%</b>

Like colostrum feeding, percentage of EBF was the highest (100%) among mothers education up to Higher Secondary level & above. The percentage of mothers exclusive breastfeeding declined with level of education. 85.71% among secondary, 80.00 among primary and 49.34% among just literate mothers. The percentage of EBF was the lowest (31.01%) among illiterate mothers. The association between education and exclusive breastfeeding was found to highly significant (p<0.01).

**Table 5 Socioeconomic status(modified B.G.Prasad classification of socio-economic status) and Colostrum Feeding**

Socio-economic status	No	Percentage	Yes	Percentage	Total
Upper class	1	25.00	3	75.00	4
Upper middle class	1	8.33	11	91.67	12
Middle class	42	38.89	66	61.11	108
Lower middle class	123	61.81	76	38.19	199
Lower class	43	64.18	24	35.82	67
<b>Total</b>	<b>210</b>	<b>53.85%</b>	<b>180</b>	<b>46.15%</b>	<b>390</b>

The prevalence of colostrum feeding was high among upper class (75.00%) and upper middle class (91.67%). As Socio-economic status declining the prevalence of colostrum feeding also declining in almost similar way i.e. 61.11% among middle class, 38.19% among Lower middle class and 35.82% among Lower class. The Association between Socio-economic status and EBF was highly significant. (P<0.01)

**Table 6 Socioeconomic status and Exclusive breast Feeding**

Socio-economic status	Yes	Percentage	No	Percentage	Total
Upper class	3	75.00	1	25.00	4
Upper middle class	10	83.33	2	16.67	12
Middle class	64	59.26	44	40.74	108
Middle lower class	79	39.70	120	60.30	199
Lower class	24	35.82	43	64.18	67
<b>Total</b>	<b>180</b>	<b>46.15</b>	<b>210</b>	<b>53.85</b>	<b>390</b>

The prevalence of exclusive breast feeding was high among upper class (75.00%) and upper middle class (83.33%). As socioeconomic status is declining, prevalence of exclusive breast feeding is also declining in similar way i.e. 59.26 % in middle class, 39.67% in lower middle class and 35.82 % in lower class (P < 0.01)

**Conclusion-**

Majority of mothers discarded colostrum and there is an association between Socio-economic Status and educational status of mothers and colostrum feeding. The prevalence of colostrum feeding was high among educated mothers than illiterate mothers and the same association was also found with Socio-economic status. Similar to colostrums feeding majority of infants were not exclusively breast fed and the prevalence of Exclusive Breastfeeding was also low among illiterate mothers and mothers belonging to lower class socio-economic status.

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