

Original Research Article

## Breastfeeding Practices in a Rural Area of Dibrugarh District: A Community Based Cross Sectional Study

Partha Saikia<sup>1</sup>, Ratna Sarma<sup>2</sup>, Rimpi Gogoi<sup>3</sup>

<sup>1</sup>Registrar, <sup>2</sup>Professor and Head of the Department, <sup>3</sup>Demonstrator,  
Dept of Community Medicine, Assam Medical College, Dibrugarh, Assam

Corresponding Author: Partha Saikia

### ABSTRACT

**Background:** Feeding the child with breast milk soon after birth is the first fundamental right of the child. Correct breastfeeding practices is essential for survival, proper growth and development of a newborn.

**Objective:** To assess the breastfeeding practices in a rural area of Dibrugarh District

**Material and method:** A Community based cross-sectional study was conducted among 257 infants aged 0-6 months in a rural area of Dibrugarh district, Assam from August 2013 to July 2014. Data was collected by interviewing the mothers of the infants using a pre-designed and pre-tested proforma.

**Statistical analysis:** The data was analyzed using standard statistical software: SPSS (version 16.0) and presented by using percentage.

**Results:** Majority of the infants (55.3%) infant were in the age group of 5-6 months. 51.8% were males and 60.7% were of birth order 1. 82.5% belonged to Hindu religion, 67.3% belonged to OBC category and 68.5% were joint families. Most of the families (42.0%) belonged to socioeconomic Class IV. Majority of the deliveries (97.7%) were institutional. 73.5% neonates were initiated breastfeeding within 1 hour of birth. 91.8% neonates were fed colostrums. 16.7% neonates were given pre-lacteal feed. 90.7% were breastfed 8 or more times in 24 hours. 91.1% neonates were breastfed on demand. 89.9% neonates were breastfed from both the breasts in each feed. 93.4% were breastfed till they left it own. All the neonates (100.0%) were breastfed at night.

**Conclusion:** Proper health and nutritional education should be provided to all pregnant and lactating mothers for promotion and protection of correct breastfeeding practices.

**Keywords:** Early initiation of breastfeeding, Colostrum, Prelacteal Feeding, Rural area.

### INTRODUCTION

Feeding a child with breast milk soon after birth is the first fundamental right of the child. The health of the infants mainly depends upon appropriate breast feeding and weaning practices. Breastfeeding is the most effective and safe way to provide a baby with complete food and protection, and with a caring environment. <sup>[1]</sup>

For establishing successful lactation as well as for providing 'Colostrum' (mother's first milk) to the baby,

breastfeeding as soon as possible after birth is extremely important. <sup>[2]</sup> Breastfeeding should ideally be initiated immediately after birth, preferably within one hour. <sup>[3]</sup> Delayed initiation of breastfeeding, which is a common practice in India, deprives the child from the concentrated source of anti-infective properties, vitamin A and protein available in colostrum. Giving the child food other than breastmilk in the early days after birth is very harmful as it provides an opportunity for introduction of infections to

the child and the child may suffer from various diseases which may lead to morbidity and mortality. [4]

Colostrum is very important for a newborn. It contains all the essential nutrients a child need in the early part of his life. The anti-infective substances protect the baby from various infectious agents that causes early childhood morbidity and mortality. Colostrum is basically the first immunization a child receives from the mother. As colostrums are yellow in color and thick in consistency some mothers belief it as dirty and indigestible and discarded it. [2]

Prelacteal is the food other than breastmilk given to the newborn before initiation of breastfeeding. Prelacteal food such as infant formula, honey etc are a source of introduction of infection during its preparation. This practice of giving prelacteal is still prevalent in our society and it delays the initiation of breastfeeding and hampers the proper establishment and future success of breastfeeding. [5]

Breastfeeding is an important child survival intervention. Breastfeeding within an hour of birth could prevent 20% of newborn deaths. Infants who are not breastfed are 15 times more likely to die from pneumonia and 11 times more likely to die from diarrhoea than children who are exclusively breastfed, which are two leading causes of death in children under-five years of age. In India, only 44.6% of mothers initiate breastfeeding within one hour of birth despite the fact that about 78.7% of mothers deliver in institutions. [6] In rural areas of Dibrugarh district, DLHS-3 showed that 79.9% neonates were breastfed within 1 hour. [7] Considering the above fact, the present study was carried out with the objective to study the breastfeeding practices in rural area of Dibrugarh district, Assam.

## MATERIALS AND METHODS

A community based cross sectional study was conducted in the rural area of Dibrugarh district for a period of one year

from August 2013 to July 2014. A sample size of 257 was calculated considering the percentage of children breastfed within 1 hour of birth in rural areas of Dibrugarh district to be 79.9% (DLHS-3) and taking 5% absolute error. [7] There are 6 Block PHCs in Dibrugarh district. For conducting the study one block namely Lahowal Block was selected randomly. A list of all the sub-centres (SC) in the Lahowal Block was prepared. There were a total of 35 SCs. The number of study subjects (mother of infants aged 0-6 months) to be included from each SC was decided by proportional allocation. In each sub-centre the first house was selected by picking up a random starting number, thereafter consecutive houses were visited until the required number of study subjects in each sub-centre area was obtained. The same procedure was repeated in all the sub-centres until the required sample size was achieved.

The data was analyzed using standard statistical software: SPSS (version 16.0) and presented by using percentage.

The study was conducted after clearance by the Institutional Ethics Committee of Assam Medical College and Hospital, Dibrugarh.

### Inclusion criteria:-

All the mothers of infants aged 0-6 months who gave consent.

### Exclusion criteria:-

The mothers of the infants who did not give consent and those who did not co-operate to participate.

## RESULTS

In the present study, majority of the neonates (55.3%) were in the age group of 5-6 months followed by 3-4 months (33.5%), 51.8% were males while 48.2% were females and 60.7% were of birth order 1. Most of the neonates (82.5%) belonged to Hindu religion, 67.3% belonged to OBC category and 68.5% were joint families. Most of the families (42.0%) belonged to socioeconomic Class IV. [Table 1]

**TABLE 1: Distribution of neonates according to socio-demographic profile**

Characteristics		Number	Percentage (%)
Age (in months)	0-2	29	11.2
	3-4	86	33.5
	5-6	142	55.3
Sex	Male	133	51.8
	Female	124	48.2
Birth order	1	156	60.7
	2	83	32.3
	3 and above	18	7.0
Religion	Hindu	212	82.5
	Muslim	30	11.7
	Christian	15	5.8
Caste	General	52	20.2
	OBC	173	67.3
	SC	13	5.1
	ST	19	7.4
Type of family	Nuclear	81	31.5
	Joint	176	68.5
Socio-economic status (B. G. Prasad method, 2013)	I	7	2.7
	II	25	9.7
	III	37	14.4
	IV	108	42.0
	V	80	31.1

Most of the mothers (53.3%) were in the age group of 20-24 years. 28.0% of the mother were illiterate. Majority (73.2%) were housewives. [Table 2]

**Table 2: Distribution of the mothers according to their age, education, occupation.**

Characteristics		Number	Percentage
Age (in years)	15-19	27	10.5
	20-24	137	53.3
	25-29	74	28.8
	30-39	17	6.6
	40 and above	2	0.8
Education	Illiterate	72	28.0
	Primary school	27	10.5
	Middle school	52	20.2
	High School	38	14.8
	Intermediate/ Post high school	62	24.1
	Graduate and above	6	2.3
Occupation	Housewife	188	73.2
	Tea garden worker	54	21.0
	Cultivator	0	0
	Business	0	0
	Service	10	3.9
	Daily wage earner	5	1.9

73.5% neonates were initiated breastfeeding within 1 hour of birth. The most common reason for delayed initiation of breastfeeding (>1 hour after birth) as cited by the mothers was milk not secreted (42.6%) followed by mother's illness (30.9%), baby's illness (19.1%) and custom (2.9%). 91.8% neonates were fed colostrums after birth. The reasons of not giving colostrum to baby as cited by

mothers were milk not secreted (38.1%), mother's illness (19.0%), baby's illness (14.3%), custom (9.5%) and ignorance (4.8%). 16.7% neonates were given pre-lacteal feed. The most common pre-lacteal feed given to the neonates was infant formula (67.4%) followed by honey (18.7%), plain water (9.3%) and sugar water (4.6%).

Most of the neonates (90.7%) were breastfed 8 or more times in 24 hours. 91.1% neonates were breastfed on demand and 89.9% neonates were breastfed from both the breasts in each feed. Majority of the neonates (93.4%) were breastfed till they left it own and all the neonates (100.0%) were breastfed at night. [Table 3]

**Table 3: Distribution of the mothers of the neonates according to breastfeeding practices**

Characteristics		Number	Percentage (%)
Time of Initiation of breastfeeding (N=257)	<1 hour	189	73.5
	≥1 hour	68	26.5
Reasons of delayed initiation (N=68)	Customs	2	2.9
	Mother's illness	21	30.9
	Baby's illness	13	19.1
	Milk not secreted	29	42.6
	Ignorance	1	1.5
	Elder's advice	1	1.5
Colostrum (N=257)	Given	236	91.8
	Discarded	21	8.2
Reasons of discarding colostrums (N=21)	Customs	2	9.5
	Mother's ill	4	19.0
	Baby's ill	3	14.3
	Milk not secreted	8	38.1
	Ignorance	1	4.8
	Elder's advice	2	9.5
Pre lacteal feed given (N=257)	Yes	43	16.7
	No	214	83.3
Type of pre-lacteal feed (N=43)	Plain water	4	9.3
	Sugar water	2	4.6
	Honey	8	18.6
	Infant formula	29	67.4
Frequency in 24 hours	<8 times	24	9.3
	8 or more	233	90.7
Type of breastfeeding	On demand	234	91.1
	Scheduled	23	8.9
Pattern of breastfeeding	One breast	26	10.1
	Both breast	231	89.9
Duration of breastfeeding	Leaves it own	240	93.4
	Mother stops	17	6.6
Breastfeeding at night	Yes	257	100.0
	No	0	0.0

## DISCUSSION

In the present study, majority of the neonates (55.3%) were in the age group of 5-6 months followed by 3-4 months

(33.5%), 51.8% were males while 48.2% were females and 60.7% were of birth order 1. Majority of the neonates (82.5%) belonged to Hindu religion, 67.3% belonged to OBC category and 68.5% were joint families. Most of the families (42.0%) belonged to socioeconomic Class IV.

In the present study it was observed that 73.5% neonates were initiated breastfeeding within 1 hour. The finding of the present study was somewhat similar to DLHS-3 (2007-08) Dibrugarh (74.9%), AHS (2012-13) Assam (75.6%), Nayak S. et al. (70%), Yerpude P. and Jogdand K. (71.1%) and Katara PS. et al. (76%). [7-11] The most common reason for delayed initiation of breastfeeding (>1 hour after birth) as cited by the mothers was milk not secreted (42.6%) followed by mother's illness (30.9%), baby's illness (19.1%) and custom (2.9%).

In the present study, the healthy practice of colostrum feeding was followed in 91.8 % neonates which was similar to the study of Gandhi S J. et al. (90.9%) and Wadde SK. et al. (91.18%). [12,13] The present study found that the most common reason of not giving colostrum to the neonates was that milk was not secreted (38.1%) followed by mother's illness (19.0%), baby's illness (14.3%), custom (9.5%) and ignorance (4.8%) which was similar to finding obtained by Gandhi SJ. et al. in Gujarat who observed that the most common reason of not giving colostrum was that milk not secreted (40.9%). [12] On the other hand, the studies conducted by Singh J. et al. and Ahmed S. et al. observed that elder's advice was the most common reason of discarding colostrum. [14,15]

Discarding colostrum and feeding the baby with food other than breastmilk is still prevalent in our society. In the present study it was observed that 16.7% neonates were given pre-lacteal feeding. Contrast to the present study a higher percentage were observed in studies done by Katara PS. et al. (36.2%). and Wadde SK. et al. (40.2%). [11,13] The most common pre-lacteal feed given to the neonates was infant formula

(67.4%) followed by honey (18.7%), plain water (9.3%) and sugar water (4.6%) in the present study. Yerpude P. et al., Singh J. et al. and Gupta M. and Swami HM. found that the most common pre-lacteal feeding given were honey (48.45%) which is contrast to the finding in the present study. [10,14,16]

In the present study, 90.7% neonates were breastfed 8 or more times in 24 hours which was higher than the study done by Nayak S. et al. (44%) and Shrivastav P. et al. (65.9%). [9,17] The variation in the findings might be due to difference in study setting. 91.1% neonates were breastfed on demand in the present study which was similar to the study of Wadde SK. et al. (90.52%) and Shaili V. et al. (89.1%). [13,18] The present study showed that 89.9% neonates were breastfed from both side after emptying the first breast in each feed which was comparable to the findings of Mohammed ES. et al. (82.7%). [19] However, Shrivastav P. et al. (59.8%) and Shaili V. et al. (76.5%) and recorded a lower percentage compared to the finding of the present study. [17,18]

In the present study, 93.4% neonates were breastfed till he left it own while 6.6% neonates were stopped breastfeeding by their mothers. The finding was higher than the studies conducted by Singh J. et al. (76.7%) and Shaili V. et al. (72.2%). [14,18] The difference in the findings might be due to different study setting. In the present study, all the neonates (100%) were breastfed during night. Mohammed ES. et al. in their study in rural areas of Egypt recorded that 71.7% neonates were breastfed at night which is lower than the present study. [19]

## CONCLUSION

The study revealed that delayed initiation of breastfeeding was still prevalent in this rural area. So, there is a need to make effort for proper health and nutritional education to all pregnant and lactating mothers for promotion and protection of correct breastfeeding practices. Moreover

the harmful practices of giving prelacteal should be discouraged with the support of health worker.

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