

## Original Research Article

DOI: <http://dx.doi.org/10.18203/2394-6040.ijcmph20194480>

# Study of breast feeding knowledge among mothers in perinatal period admitted in a tertiary care centre in Dehradun, Uttarakhand, India

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**Received:** 11 June 2019

**Revised:** 18 July 2019

**Accepted:** 05 September 2019

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## ABSTRACT

**Background:** Exclusive breast feeding reduces infant and neonatal mortality. NFHS-3 (2005-06) and NFHS-4 (2015-16) (India), showed only marginal improvement from 46% to 55%, regarding exclusive Breast feeding, among children during first 6 months of life. If mother's knowledge is good, she will be confident to take decision on Breast feeding. This study was conducted to assess, the knowledge, regarding breast feeding, among mothers in perinatal period admitted in a tertiary care centre in Dehradun, Uttarakhand, India.

**Methods:** This was descriptive, cross-sectional study carried out among 300 perinatal mothers. The data was collected using self-administered questionnaires.

**Results:** 95% of mothers knew that the breast milk is best for the baby. 75% of mothers were aware that the breast milk should be the neonates first feed, though only 55% knew about initial breast milk (colostrum). 77% of the mothers said the time for first feed should be within an hour. 27% said baby should be fed as and when hungry. 56% of the mothers stated that the baby should be allowed to feed as long as the baby sucks at the breast. 63.7% mothers were aware about the duration of EBF.

**Conclusions:** Knowledge regarding exclusive breast feeding is inadequate among mothers in Uttarakhand. The government must incorporate breast feeding topic in schools to improve the knowledge on breast feeding, so that mothers can take decision independently.

**Keywords:** Knowledge, Breast feeding, Colostrum

## INTRODUCTION

Nutrition is of paramount importance especially during growing period of life. It affects both the growth and development, which are detrimental for living a happy and healthy life. All mothers should be able to practice breast feeding and all infants should be fed exclusively on breast milk from birth to 6 month of age.<sup>1-3</sup> There are so many evidences in support of mother's milk as the best milk for baby and additional benefits of breast feeding like emotional bonding and health benefits to mother.

According to UNICEF, only 39% of infants 0-5 month old in the developing world are exclusively breastfed (EBF). About 1.45 million lives are lost due to suboptimal/breastfeeding in developing countries per year.<sup>4,5</sup> NFHS 4 data for 15 states from India shows rise in institutional deliveries to 82.2%, with initiation of early breastfeeding stagnant at 47.7%, and EBF values of 40% for the first six months of life.<sup>6</sup> It is important that mother should have adequate knowledge regarding breast feeding, so that when time comes, she does not have to depend on others for the information.

This study was conducted to know the breast feeding knowledge among mothers in perinatal period admitted in a tertiary care centre in Dehradun, Uttarakhand, India.

## METHODS

This was a cross-sectional study conducted using self-administered semi-structured questionnaire. The study was conducted in postnatal wards of Shri Mahant Indresh Hospital, Patel Nagar, Dehradun, Uttarakhand. 300 postpartum mothers were recruited for the purpose of this study between January 2017 to August 2017. A log of postnatal mothers admitted during study period was maintained and mothers were approached for the study using convenient sampling technique.

### ***Inclusion criteria***

Post-partum mothers delivered in SMIH (Shri Mahant Indresh Hospital) or mothers delivered outside but admitted in SMIH during study period. Post-partum mothers who gave consent to voluntarily participate in our study were included.

### ***Exclusion criteria***

Post-partum mothers who declined to give consent to participate in the study.

### ***Data collection***

The participants were briefed about the study purpose, objectives, benefits and informed consent was obtained

from each participant. The data was collected by interview method from all the eligible subjects willing to participate in the study by one time contact, within first three days of post-partum period by using semi-structured questionnaire.

Confidentiality was maintained at all levels of study.

### ***Data analysis***

All the data collected by questionnaire were entered in SPSS version 22 software (Statistical package of social sciences). Statistical analysis of the data was done using SPSS version 22. Categorical data was expressed in frequency and percentage. The graphs were formed using Microsoft Excel version 16. Association of breast feeding practices and socio-demographic factors of postnatal mothers were seen by applying binomial logistic regression in SPSS 22.  $P<0.05$  was considered significant.

## **RESULTS**

Data collected from 300 postnatal mothers from postnatal wards.

About 85% of mothers were in the age group of 20-30years. More than 90% of the postnatal mothers were educated upto matric or higher similar to educational status of their husbands. 90% of the postnatal mothers were housewives (Table 1).

**Table 1: Distribution of demographic data (n=300).**

Variables	Frequency (N)	Percentage (%)
<b>Age in years</b>	≤20	2
	21-25	124
	26-30	131
	31-35	35
	36-40	8
<b>Mother education</b>	Illiterate	16
	Less than matric	12
	Metric pass	134
	Graduate	90
	Post-graduate	48
<b>Mother occupation</b>	Housewife	271
	Business	7
	Service	22
<b>Husband education</b>	Illiterate	10
	Less than matric	7
	Metric pass	111
	Graduate	125
	Post-graduate	47

**Table 2: Distribution of demographic data (n=300).**

Variables	Frequency (N)	%
Family income (Rs.)	≤4000	3 1.0
	5000-10000	46 15.3
	11000-20000	188 62.7
	21000-30000	55 18.3
	≥31000	8 2.7
Family type	Nuclear	38 12.7
	Joint	262 87.3
Parity	Primigravida	153 51.0
	Multigravida	147 49.0
Mode of delivery	NVD	204 68.0
	LSCS	96 32.0

**Table 3: Distribution of mothers as per their knowledge on feeding (n=300).**

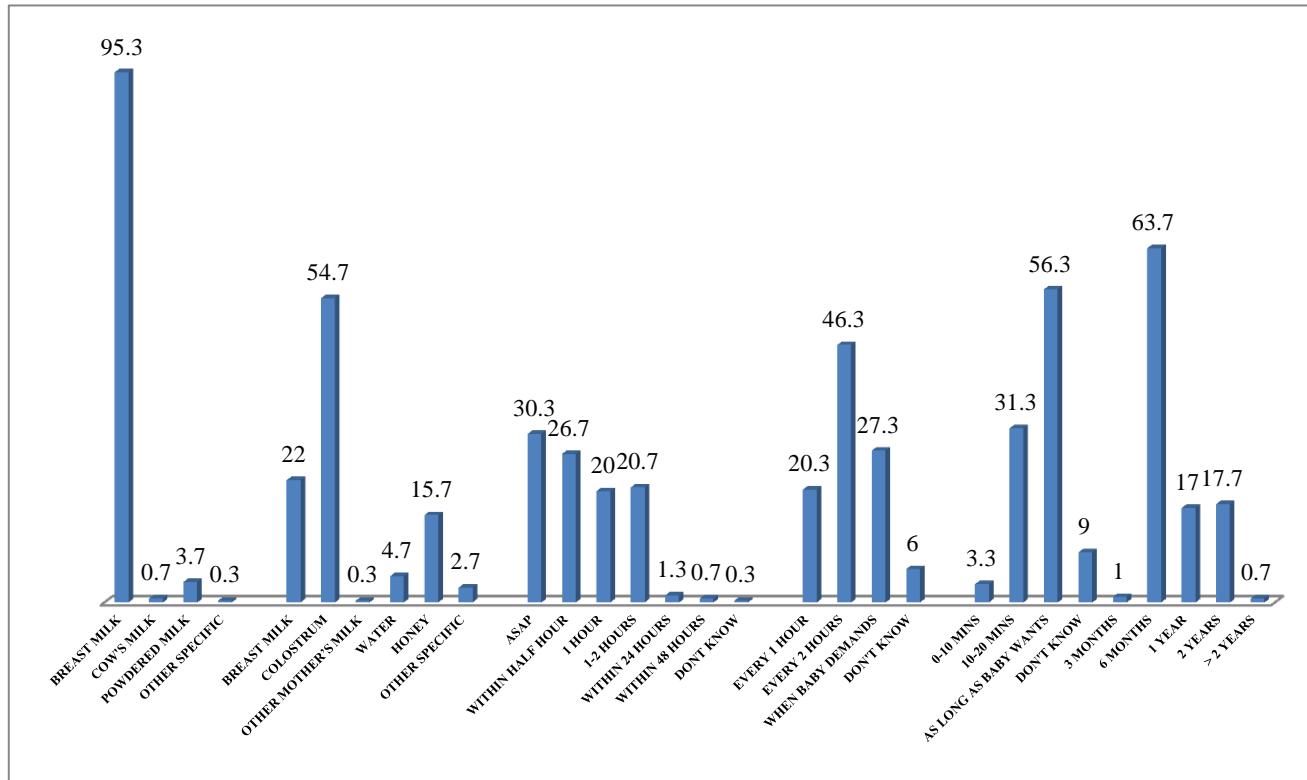
Variables	Frequency (N)	%
Knowledge about best milk for the baby.	Breast milk	286 95.3
	Cow's milk	02 0.7
	Powdered milk	11 3.7
	Other specific	01 0.3
Knowledge about neonates first feed	Breast milk	66 22.0
	Colostrum	164 54.7
	Other mother's milk	01 0.3
	Water	14 4.7
	Honey	47 15.7
	Other specific	08 2.7
Knowledge of the appropriate time of first feed after delivery	Asap	91 30.3
	Within half hour	80 26.7
	1 hour	60 20.0
	1-2 hours	62 20.7
	Within 24 hours	04 1.3
	Within 48 hours	02 0.7
	Don't know	01 0.3
Knowledge of what should be the time interval between two consecutive feeds.	Every 1 hour	61 20.3
	Every 2 hours	139 46.3
	When baby demands	82 27.3
	Don't know	18 6.0
Knowledge of duration of each feed	0-10 mins	10 3.3
	10-20 mins	94 31.3
	As long as baby wants	169 56.3
	Don't know	27 9.0
Knowledge regarding duration of EBF	3 months	03 1.0
	6 months	191 63.7
	1 year	51 17.0
	2 years	53 17.7
	>2 years	02 0.7
Knowledge of whether bottle feeding is harmful for baby or not	Yes	223 74.3
	No	44 14.7
	Don't know	33 11.0

In this study, 87.3% of the postnatal mothers belonged to joint family and about half of the mothers had first baby. More than 2/3<sup>rd</sup> of the mothers delivered by normal vaginal delivery (Table 2).

In our study we observed that 95.3% of mothers were aware that the breast milk is best for the baby followed by 4 % preferring powdered milk.. However, regarding neonatal first feed, only 76.7% of mothers were aware

that it should also be the neonates first feed. Awareness that initial milk, during first few days, is different (Colostrum) was seen in 54.7% of mother. Only 30.3% of mother stated that baby should be breast fed as soon as possible and overall 77% of mother knew to breastfeed

within an hour. 27.3% of mother were aware of breast feed on demand while fixed schedule feeding like 1 hourly and 2 hourly was stated by 20.3% and 46.3% of mothers respectively.



**Figure 1: Distribution of various responses regarding breast feeding knowledge among post-natal mothers.**

**Table 4: Association between selected demographic factors with knowledge regarding feeding.**

Dependent variable	Independent variable		P value	Odd's ratio
	Factors	Category		
Mothers who said breast milk as new-born's first feed	Income	<5000	0.002	6.717e-14
		5000-9999	0.650	8.519
		11000-19999	0.805	3.079
		21000-29999	0.981	1.115
		≥30000	0	0
Mothers who said colostrum should be new-born's first feed	Mothers education	Illiterate	0.239	10.202
		Metric pass	0.036	59.536
		Graduate	0.038	118.821
		Post-graduate	0.097	108.625
		Less than matric	0	0
Mothers who said that they feed their baby every 2 hourly	Mothers education	Illiterate	0.064	39.928
		Metric pass	0.010	48.802
		Under-graduate	0.069	20.746
		Post-graduate	0.061	50.835
		Less than matric	0	0
Mothers who said that they feed their baby as long as baby wants	Mother occupation	Housewife	0.026	10.234
		Business	0.353	50.329
		Service		

**Table 5: Association between selected demographic factors with feeding practices.**

Dependent variable	Independent variable		P value	Odd's ratio
	Factors	Category		
Mothers who said they discard their initial milk	Mothers education	Illiterate	0.395	0.333
		Metric pass	0.043	0.154
		Graduate	0.039	0.114
		Post-graduate	0.261	0.333
		Less than matric	0	0

Regarding duration of each breast feed, 56% of the mothers informed that the baby should be fed as long as the baby sucks at the breast. 34.6% said that the baby should be allowed to suck for about 20 minutes. Only 63.7% mothers were aware about the duration of EBF. 74.3% mothers had knowledge about harmful effects of bottle feeding (Table 3).

Factors which were found to have statistically significant association with the knowledge of mothers in relation to neonates first feed were mothers with family income <5000 who said that breast milk should be neonates first feed and educated mothers who were matric pass and undergraduates who said that colostrum should be the first feed of the neonate.

Factors which were found to have statistically significant association with the knowledge of mothers in relation to the duration of each feed of the baby were housewife mothers who said that they feed their baby as long as the baby wants and mothers who were matric pass who said that they feed their baby every 2 hourly (Table 4).

Factor which was found to have statistically significant association with practice of mothers in relation to discarding the initial milk after delivery was matric pass and undergraduate mothers who said they discarded their breast milk for the first 2-3 days after delivery (Table 5).

## DISCUSSION

It is apparent from our study that it is almost well established (95.3%), among mothers of Uttarakhand, that breast milk is best for baby which is higher than reported by Kishore et al i.e., 84% in 2007 at Chandigarh, India.<sup>7</sup> But this knowledge is not enough for safety of infant as we see 23.4% of mothers were not aware that breast milk should be the first feed of the baby and hence, were resorting towards prelacteal feeds. Mise et al from Karnataka reported that 24% of mothers believed in giving prelacteal feeds.<sup>8</sup> Junaid et al reported that 36% of mothers were discarding initial breast milk (colostrum) were giving prelacteal feeds similar to Reshma et al.<sup>9,10</sup> Shaili et al reported 61.8% of mother giving prelacteal feeds.<sup>11</sup> Kala et al reported 77.8% of mothers were giving prelacteal feeds.<sup>12</sup> Success of EBF depend largely on first feed whether it is prelacteal or a breast feed. Women who had experienced difficulties with breastfeeding in the first

4 weeks had a higher risk for discontinuing full breastfeeding before 6 months.<sup>13</sup>

77% of mothers were aware that breast feeding should be started within an hour of birth. Mise et al reported that 38% of the cases initiated breastfeeding within 1 hour of delivery, 30.4% after 4 hours and 11.6% on the 1st day.<sup>8</sup> We reported high incidence, as these were admitted in tertiary level hospital and they were counselled throughout the stay. Shaili reported a very low incidence of initiation of breast feeding of 21.4 % within an hour of birth.<sup>11</sup> This is because this study was a community survey and it had recall bias. Nethra et al reported that 46% of mothers breast fed their newborn within 1 hour of delivery.<sup>14</sup> Pati et al reported initiation of breastfeeding within 1 hour of delivery by mothers of tribal block of Odisha.<sup>15</sup> The effect of time of initial breastfeed on subsequent establishment of breastfeeding and duration has been documented.<sup>16-17</sup> The earlier the initiation the better the establishment and longer the duration of breastfeeding. It also ensures prompt intake of colostrum and exclusion of contaminated prelacteals. Prelacteal feeds are common in communities that have not been mobilized and studies also including from India have reported their use even up to 90-100%.<sup>18-20</sup>

On demand feeding was known to 27.3% of mothers while fixed breast feeding schedule was known to 66.6% of mothers and 6% did not know time gap between two feedings. Junaid et al. reported on demand feeding in 51.5% cases and fixed feeding schedule in 46% while 3 percent did not know feeding timings and would feed on elders advice.<sup>9</sup> Mise reported 60.7% of the infants received breast milk on demand basis and 39.3% thought that breastfeeding should be given at scheduled time.<sup>8</sup> Shaili et al reported feeding on demand was found in majority (89%) of mothers.<sup>11</sup> Similar to (84.1%) study in Bengal by Bandyopadhyay.<sup>21</sup> In yet another study at Kanpur by Srivastava et al it was found to be only 38%.<sup>22</sup>

Demand feeding has earlier been reported to be a common practice in India, a factor, which has a positive influence on breast-feeding. This is also recognized as one of the ten steps to successful breast-feeding as recommended by WHO or UNICEF.

56.3% of mothers stated that baby should be allowed to feed at breast as long as baby wants while 34.6% stated it to be upto 20 minutes.

Correct duration of EBF was known to 63.7% of mothers while Vijayalakshmi et al reported it as 85.2% in southern India.<sup>23</sup> Junaid et al reported EBF practices among 41.41% of mothers.<sup>9</sup> Mise et al reported that majority (74.1%) cases have an opinion that exclusive breastfeeding should be continued up to 6 months of age.<sup>8</sup> Kishore et al reported EBF knowledge among 38% of the mothers.<sup>7</sup> Only 38% of the mothers did the exclusive breast-feeding until 6 months in survey conducted by Acharya et al and Shaili et al reported only 5.13 mothers were practicing EBF.<sup>11</sup>

## CONCLUSION

The study highlighted that breastfeeding knowledge is suboptimal in Uttarakhand and we need to educate mothers regarding the recommendations issued by WHO. This would help mothers to take independent decision as what is best for her baby rather than rely on inadequate information, from people around, after birth of baby. We recommend that such information should be a part of curriculum during school studies considering the benefits of breastfeeding. Even if mothers are not educated during ANC visits, they should be counselled along with the relatives in postnatal wards, to improve established breast feeding practices.

## ACKNOWLEDGEMENTS

The authors are indebted to the mothers who participated in the study.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: The study was approved by the Institutional Ethics Committee*

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**Cite this article as:** Thapliyal SK, Bangari A, Ruchi. Study of breast feeding knowledge among mothers in perinatal period admitted in a tertiary care centre in Dehradun, Uttarakhand, India. *Int J Community Med Public Health* 2019;6:4278-84.