

## A Study on Knowledge, Attitude and Practices of Postnatal Mothers about Breastfeeding and related Problems in Newborns

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**Introduction:** Early initiation and exclusive breastfeeding up to 6 months of age and later continuation of breastfeeding up to 2 yrs is an essential component of an infant's nutrition. Breastfeeding rates are far less in India owing to poor knowledge, misconceptions and local socio-cultural practices. Knowledge, attitude, and practices studies regarding breastfeeding among mothers in India are limited. Present study can be a means to assess above domains and to modify practices towards a positive change. **Methods:** This is a cross-sectional study on postnatal mothers over three months using a semi-structured questionnaire. Data analysis is done by descriptive statistics like percentages of positive and negative responses using Microsoft Excel. **Results:** Around 48% of participant mothers know that exclusive breastfeeding needs to be given up to age of 6 months, and 46.6% of members have knowledge that breastfeeding should be continued up to 2yrs of age along with complementary foods. Around 61.8% felt that formula-fed babies are more healthy than breastfed ones. About 22.8% of them were given formula milk in addition to breastfeeding. A meagre (4.2%) number of them did not give breastfeeding at all. **Conclusion:** Our current study reflects some gaps in knowledge and needs to modify some attitudes and practices about breastfeeding and related practices, but improvement observed compared to past studies. Overall there is a need to strengthen Baby Friendly Hospital Initiative further.

**Keywords:** Breastfeeding, Knowledge, Attitudes, Practices, Postnatal mothers

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## Introduction

Breast milk is the natural and first food of the newborn and provides it with all the required nutrients in adequate quantity up to the first six months of life and meets up to half or more of the nutrient requirements in the second half of the first year of life, and up to a third of what is needed in the second year of life [1].

WHO and UNICEF recommend that children initiate breastfeeding within the first hour of birth and be exclusively breastfed for the first six months of life – meaning no other foods or liquids are provided, including water. Infants should be breastfed on demand – that is, as often as the child wants, day and night. No bottles, teats or pacifiers should be used. From the age of 6 months, children should begin eating safe and adequate complementary foods while breastfeeding for up to 2 years and beyond [2].

Globally the exclusive breastfeeding rate is around 38 percent. The same in the Indian setting ranges from 35.8 percent in Meghalaya to 77.2 percent in Chhattisgarh. Analysis of the EBF trends shows that, over the last decade, the percentage of infants (under six months of age) who were exclusively breastfed in India increased from 46.4 percent to 54.9 percent [3]. This improvement can be achieved only with proper knowledge and positive attitude of the mothers translating into desired practice related to breastfeeding. The current scenario of low literacy rates and low dissemination of information about this knowledge in our country hinders the improvement of attitudes and practices. Misconceptions among mothers have made it challenging to execute them at the community level. Issues such as career, readily available and aggressively promoted formula-based feeds, social pressures, and illness among lactating mothers have further lowered breastfeeding rates [4].

In India, the rates of early initiation, exclusive breastfeeding are far from desirable, and further KAP studies about breastfeeding are limited among mothers in the Indian scenario [5]. In this context, the present study can be a means to assess the above domains related to breastfeeding in postnatal mothers, particularly in this part of the country where there is limited data about this aspect, thus can enable us to modify the attitudes and practices towards positive change.

## Materials and Methods

**Setting:** This study is carried out on postnatal mothers attending the immunization clinic and those delivered at Anil Neerukonda Hospital of NRI Institute of Medical Sciences, Sangivalasa, Visakhapatnam Dist. Andhra Pradesh.

**Duration and type of study:** This cross-sectional observational study was conducted over three months.

**Sampling methods:** Purposive sampling

**Sample size calculation:** Sample size is taken based on previous studies in the literature.

**Inclusion criteria:** A total of 118 mothers have been included in the study.

01. Mothers delivered in the hospital
02. Mothers were attending the immunization clinic with children aged less than one year of age.

**Exclusion criteria:**

01. Mothers of newborns who are admitted to NICU
02. Mothers of a newborn with significant congenital anomalies
03. Mothers not consenting for the study

**Data collection procedure:** A semi-structured questionnaire of 34 questions prepared by adaptation from the WHO, KAP survey [6,7], is administered to assess the knowledge, attitude and practices of the mothers. Following a basic interview on demographic data, the mothers are given three sets of questions each regarding knowledge, attitude and practices of breastfeeding and responses are recorded on a scale of yes or no. Following the interview, all the mothers were educated about the importance and advantages of breastfeeding. A single observer did all this process of interview and dissemination of education.

**Scoring system:** none

**Surgical procedure:** none

**Ethical considerations and permissions:**

Approval from the Institutional Ethics Committee has been obtained before the commencement of the study. Informed consent is taken from all the participants of the study.

**Statistical analysis:** The collected data is analyzed, and descriptive statistics

Like percentages are calculated for the positive and negative responses for the interviewed questions using Microsoft Excel.

## Results

Table No.1 shows that the majority (61%) of the study population is in the age group of 21 to 25 years, predominantly of rural background, and most of them are either educated up to class 10 or below (35.6%) or graduated (35.6%). Most (87.3%) of them are unemployed, and the majority (54.2%) belong to the lower middle class of modified Kuppuswamy classification of socioeconomic status. The majority (61%) of the study population are primes, and most (50%) of the deliveries were by LSCS under regional anaesthesia.

**Table No. 1: Demographic details of participants**

AGE DIST.			OCCUPATION		
<18	2	1.7%	Unemployed	103	87.3%
18-20	13	11.0%	Unemployed	15	12.7%
21-25	72	61.0%	Total	118	100.0%
26-30	25	21.2%	PARITY		
31-35	6	5.1%	Prime	72	61.0%
>35	0	0.0%	Multi	46	39.0%
TOTAL	118	100.0%	Total	118	100.0%
EDUCATION			SE STATUS		
10 & below	42	35.6%	Upper	3	2.5%
Under Graduate	28	23.7%	Upper Middle	34	28.8%
Graduate	42	35.6%	Lower Middle	64	54.2%
Not Educated	2	1.7%	Upper Lower	17	14.9%
Post Graduate	4	3.4%	Lower	0	0.0%
TOTAL	118	100.0%	TOTAL	118	100.0%
TYPE OF DELIVERY					
NVD	42	35.59%			
LSCS v RA	59	50%			
LSCS v GA	17	14.41%			
TOTAL	118	100%			

NVD = Normal Vaginal Delivery

LSCS = Lower Segment Caesarean Section

RA = Regional Anaesthesia

GA = General Anaesthesia

Table No. 2 describes the responses towards the various characteristics under the knowledge domain of the study. Fourteen questions have been administered under this domain. Around 66.1% of mothers knew that colostrum is important for the child's immunity, only a few (30.5%) participant

Mothers knew that pre-lacteal feeds are unsuitable for the newborn's health. A very low fraction (25.4%) of the study participants know that breastfeeding is initiated within 1 hour of birth. Around 48% of the participant mothers know that exclusive breastfeeding needs to be given up to an age of 6 months, and 46.6% of members have the knowledge that breastfeeding should be continued up to 2yrs of age along with complementary foods. The majority (72%) of the mothers know that breastfeeding improves the bonding between the baby and the mother. Few less than half (40.6%) of the mothers of the current study knew that breastfeeding is also beneficial for a mother's health. Only 38.1% of the study population knew that a healthy baby need not be given water or other supplements up to 6 months of age. Above half of the study population (55.9%) of mothers were aware that breastfeeding could prevent life-threatening diarrhoeas and pneumonia in infants. About 39.8% of the mothers in the study group knew that. Less than a third of the participants know that expressed breast milk can be stored and used. Around 50.8% of them were aware that poor or refusal of feeding is a sign of infection in the baby. 44% of the mothers knew that good weight gain is the sign of adequate feeding.

**Table No. 2: Knowledge Domain**

S. No.	Knowledge About Breastfeeding	n	%
1	Colostrum is very important for the child's immunity	90	76.2
2	Pre-lacteal feeds are not good for newborn's health	36	30.5
3	Breastfeeding to be initiated within 1 hour of birth	30	25.4
4	Exclusive breastfeeding to be given up to 6months	57	48
5	Adequate burping to be done after each feed	50	42.3
6	Breastfeeding to be continued up to 2yrs of age	55	46.6
7	Breastfeeding helps in mother child bonding	85	72
8	Breastfeeding is also beneficial to the mother health	48	40.6
9	Healthy baby need not be given water or any other supplements up to 6m	45	38.1
10	Breastfeeding can prevent life-threatening diarrhoeas and pneumonia in an infant	66	55.9
11	Breastfeeding can produce loose stools	47	39.8
12	Expressed milk can be stored and used	35	29.6
13	Poor or refusal of feeding is a sign of infection in the baby	60	50.8
14	Adequate weight gain is a sign of adequate feeding	52	44

A total of 9 questions were asked under the attitude domain. Table No. 3 demonstrates the responses to these questions. A total of 56.7% of mothers felt that the babies must be fed on-demand at night

Also. The majority of the mothers believed that breastfeeding is easy and safe than formula feeding. Only a minor (6.7%) fraction of the study population of mothers had the misconception that breastfeeding affects the beauty of the mother. Around 37.3% of the mothers believed that the baby should not be disturbed from sleep for feeding. About 38.9% of the study population had the wrong notion that the baby should not be fed during illness. There was a wrong attitude that breastfeeding must be stopped once weaning is started in 27.9% of the mothers. Around 61.8% felt that formula-fed babies are more healthy than breastfed ones because they gain more weight. There is a misconception that a baby needs supplements for proper digestion of the milk in nearly two thirds (64.4%) of the mothers. Around 40.6% of the mothers felt that it is better to give formula milk if they had retracted nipples.

**Table No. 3: Attitude Domain**

Q. no	Attitude Towards Breast Feeding	n	%
15	I think the baby should be fed in the night also on demand	67	56.7
16	I think breastfeeding is easy and safe than formula feeding	95	80.5
17	I think breastfeeding affects the mother's beauty	8	6.7
18	I think the baby should not be disturbed from sleep for feeding	44	37.3
19	I think I should not feed when the baby has an illness	46	38.9
20	I think breastfeeding should be stopped once weaning is started	33	27.9
21	I think formula-fed babies are more healthy than breastfed ones because they have more weight gain	73	61.8
22	I think the baby needs supplements for proper digestion of milk	76	64.4
23	I think it is better to give formula if I have retracted nipples	48	40.6

Table No. 4 shows the results of the responses to questions under the practice domain of the study. There are ten questions administered under this category. About 19.2% of the mothers in the study population have given pre-lacteal feeds to their newborns. Several mothers, close to half (54.3%) of the study population, have started breastfeeding within the first hour of birth. Around 22.8% of them were given formula milk in addition to breastfeeding. The majority (87.5%) of those giving formula milk (n=32) used feeding bottles to provide the milk, and the rest used a cup and spoon or the paladai. A very low (4.2%) number of them did not give breastfeeding at all. Only around a third (34.2%) of the mothers followed the practice

Of feeding till emptying of the breast. The majority (91.2%) of them were giving on-demand feeds. Some (10.1%) mothers used a pacifier to console their crying babies. Around 42.3% of the study population of mothers were not giving burping after the feeding. Up to 22% of the mothers have not been given feeds during the nights.

**Table No. 4: Practice Domain**

Q. No.	Practice Of Breastfeeding	n	%
24	Pre-lacteal feeds given	22	19.2
25	Started breastfeeding within 1hr of birth	64	54.3
26	Was giving formula feeding in addition to breastfeeding	27	22.8
27	Used bottle to feed the milk (formula)	28(32)	87.5
28	Did not give breastfeeding at all despite no contraindications	5	4.2
29	Fed the baby till emptying of breast and then provided from the other	40	34.2
30	Was giving on-demand feeds	108	91.2
31	Used pacifier to console the baby	12	10.1
32	Not done burping after each feed	50	42.3
33	Given feeds in the night hours	92	77.9

## Discussion

The current study is conducted on 118 postnatal mothers at a tertiary care hospital. The sample population of the present study is predominantly of the rural background because of the hospital's geographic location close to the rural segment of the district, which is the feeding population for the hospital. The majority (nearly 60%) of the study population of mothers have a low education level, and more than half (54%) belong to the lower middle class.

Regarding the knowledge related to colostrum, about 76.2% of mothers knew the importance of colostrum for the child's immunity, which was 80.1% in a study by Abroo Bashir et al. done in 2018 and was 93.7% in a survey by Gangwal M et al. [9]—done at a hospital at New Delhi. This difference can be attributed to the predominant rural background of our study population and lower higher education rates in this part of the country. This shows that more effort needs to be put to impart knowledge to mothers about the importance of early initiation and exclusive breastfeeding. Regarding knowledge and practice related to pre-lacteal feeds, 30.5% of the mothers

Knew that pre-lacteal dinners are unsuitable for the baby, and around 19.2% practised giving pre-lacteal meals in the study by Abroo Bashir et al. [8]. These were 20.5% and 25%, respectively. A similar survey by Chinnasami et al. [10] showed that 10.5% of the mothers practised giving pre-lacteal feeds. These differences maybe because of the regional differences and local practices which vary in the different parts of the country. About the initiation of breastfeeding within the first 1hour of birth, in our study, 25.4% knew, and 54.3% practised this early initiation of breastfeeding, in a similar survey of Abroo Bashir et al. [8]. These findings were 21.3% and 6.5%. This shows that the results about this aspect are much better than in that region. Another comparable study by Chinnasami et al. [10] showed that the knowledge was positive in 80%, but this translated to practice in only 34.5%. This indicates that the knowledge and practice in this regard may not go hand in hand and requires motivation for both the mother and the healthcare provider.

In our study, 48% of the study participant mothers knew that exclusive breastfeeding must be given up to 6 months of age. Around 80.5% of mothers in the study felt that breastfeeding is easy and safe compared to formula feeding; when translated into practice, about 4.2% of the study population did not give breastfeeding at all even with no contraindications., and 22.8% of them were giving formula feed in addition to breastmilk. In a similar study by Abroo Bashir et al. [8], only 27% of the mothers knew about exclusive breastfeeding, and around 36.25% of the mothers in a study by Jain et al. [12] practised exclusive breastfeeding up to 6 months. Conversely, 11.1% of mothers in the study by Abroo Bashir et al. [8] felt that bottle-feeding is easier compared to breastfeeding. A study by Chinnasami et al. [10] reported practice of exclusive breastfeeding as high as 72%. This difference can be attributed to the differences in the study setting and the attending population of the hospital.

In the present study, 42% of the mothers knew the need for adequate burping after each feed, and 58 percent were practising with or without prior knowledge. Abroo Bashir et al. [8] showed closer values around 49 percent knowing to burp. Regarding knowledge about how long breastfeeding can be continued, 46.6% of the mothers knew that breastfeeding could be continued up to 2yrs of age, which was way higher in the study by Abroo Bashir et al. [8] and was 71.1% in the study

By Gangwal. M et al. [9]. In our study, 72% of the mothers had the knowledge that breastfeeding helps in mother-child bonding, and 40.65% knew that breastfeeding is beneficial to a mother's health.

Conversely, 6.75% felt that breastfeeding affects the beauty of the mother, in a similar study by Gangwal M et al. [9] and Abroo Bashir et al. [8] showed values of 93% and 87.9% in respect to the knowledge on the same. In the current study, 55.9% of mothers had the knowledge that breastfeeding can prevent the occurrence of life-threatening diarrhoea and pneumonia in children under the age of 5 years, and 40.6% of mothers had the knowledge that breastfeeding prevents breast-related illness in mothers and helps in postpartum weight loss. In a similar study by Abroo Bashir et al. [8], only 17.6% of mothers had such knowledge, and the survey by MaansiGangwal et al. [9] showed this to be 50.4%. Around 38.1% knew that a healthy newborn baby need not be given any other supplements when given exclusive breastfeeding; contrary to this, 64.4% of the mothers felt that baby needs supplements for proper digestion of the milk.

In the current study, 37.3% of mothers felt that baby should not be disturbed from sleep for feeding; at the same time, 56.7% of mothers felt that baby should be fed on demand even during night times. In a similar study by Abroobashir et al. [8]. 86.1% of mothers felt that night feeding is necessary for the newborn baby. In our study, 38.9% of mothers felt that they should not feed the baby in illness. Similar studies by Maansi Gangwal et al. [9]. and Abroobashir et al.[8] showed results as 56.7% and 38.9% for the same question. When asked about the knowledge regarding expressed breast milk, 29.6% of the study population knew this method. In a similar study by Dharmalingam A et al. [11], only 26% of the study population knew usage of expressed breast milk.

## Conclusion

Our current study reflects some gaps in the knowledge and needs to modify some attitudes and practices about breastfeeding and related practices. Further, there is also improvement in the breastfeeding rates and knowledge regarding breastfeeding compared to past studies. Overall there needs a process to strengthen the Baby-Friendly Hospital Initiative, which

Can help achieve the goals of establishing breastfeeding as the main nutrition of the newborns in most cases.

### What does This Study add?

There is a further need for strengthening processes involved in identifying knowledge gaps and modifying certain attitudes and breastfeeding practices among mothers at the community level to improve breastfeeding.

**Contributors:** All authors contributed equally in manuscript preparation and approved the manuscript.

### Abbreviations:

NVD = Normal Vaginal Delivery

LSCS = Lower Segment Caesarean Section

RA = Regional Anaesthesia

GA = General Anaesthesia

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