

**BREASTFEEDING KNOWLEDGE, ATTITUDE, AND PRACTICES IN MOTHERS OF INFANT OF 0-12 MONTHS OF AGE**VIJAY AGRAWAL<sup>1</sup>, SUSHIL KUMAR MEENA<sup>1</sup> CHARUSMITA AGRAWAL<sup>2</sup>, SHARAD BANSAL<sup>1\*</sup><sup>1</sup>Department of Pediatrics, SMS Medical College, Jaipur, Rajasthan, India. <sup>2</sup>Department of Obstetrics and Gynaecology, SMS Medical College, Jaipur, Rajasthan, India. Email: sharadpeds@gmail.com

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**ABSTRACT****Objectives:** The aim of the study was to evaluate current status of knowledge, attitude, and breastfeeding practices in mothers of infant of 0-12 months of age.**Methods:** After ethical approval, this questionnaire-based observational study was carried out for a period of 1.5 year in Department of Paediatrics, SMS Medical College and Attached Hospitals, Jaipur. All mothers of the infant of age 0-12 months brought to department were included in the study. Twenty-five questions related to knowledge, attitude, and practices were used to get data in a questionnaire.**Results:** Out of total 500 study participants, maximum 156 (31.2%) were in age group of 26-30 years. Mean score of knowledge and attitude was 11.55±4.17. In the present study, no significant difference was found between different age group, religion, age of the children, and mode of delivery for knowledge and attitude score. (p>0.05) Significantly higher knowledge and attitude score was found among urban participants, who lived in joint family, having higher education, more antenatal visits, and whose delivery took place in private hospital (p<0.05).**Conclusion:** Knowledge, attitude, and practices for breast feeding were found significantly more in mothers of urban residence, of higher education level, having good occupation, live in joint family, and went for more antenatal visits and who went for delivery at private hospital.**Keywords:** Breast feeding, Knowledge, Attitude, Antenatal Visit, Pre-Lacteal, Colostrums.© 2022 The Authors. Published by Innovare Academic Sciences Pvt Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>) DOI: <http://dx.doi.org/10.22159/ajpcr.2022v15i8.44949>. Journal homepage: <https://innovareacademics.in/journals/index.php/ajpcr>**INTRODUCTION**

Healthy children make a healthy nation, hence, the importance of feeding them right from the birth especially 1<sup>st</sup> year of life [1]. Infant feeding from birth to the 1<sup>st</sup> year of life influences growth and development. Infant feeding practices include exclusive breast feeding for 6 months, the timely and appropriate of complementary feeding after 6 months with continue breast feeding. Breast feeding is the first fundamental right of every child. Breast milk is the sources of nutrition freely available to the new born babies from the mother. Breastfeeding is important for the health and development of children. Breast milk is safest and most secures nourishment for babies and protects them against illness. The nutrients in the breast milk include all the proteins, fat, sugars, vitamins, minerals, and anti-infective factors [2].

Breast feeding delivers antibodies, which boost immune system, protect from childhood illnesses, such as diarrhea, pneumonia, and other causes of under-five mortality. Further, breastfeeding has been associated with increased intelligence; education attainment at adulthood, productivity, earning ability, and social development [3,4]. Conversely, suboptimal breastfeeding is the major cause of over 30% of child deaths, especially in low income settings and is associated with national gross economic losses [5,6].

The WHO and UNICEF started globally Baby Friendly Hospital Initiative in year 1992 to promote and support exclusive breast feeding for the safe guard of the child. Exclusive breast feeding means no other food including water should be given to child for the first 6 months of life.

Numerous studies have underlined the advantages of exclusive breastfeeding for growth, immunity, and prevention of illness in young infants. Conversely, several studies associate lack of exclusive breastfeeding with high infant mortality and morbidity from malnutrition and infections. Despite the well-recognized importance of exclusive breastfeeding, this practice is not widespread in the developing

world and the increase at the global level is very modest with much room for improvement. Infant nutrition programs worldwide continue to require investment and commitment to improve feeding practices to have maximum impact on reducing infant morbidity and mortality [7].

Every time an innocent child suffers the curse of malnutrition; the responsibility goes to the mother, the family and to the community due to their faulty or no knowledge regarding the harmful effects of pre-lacteal feeding, benefits of exclusive breast feeding, and initiation of proper weaning at correct time. It is to be realized that a million children die worldwide each year because they are not breast fed. Several millions who survive suffer from acute or chronic illness related to harmful effects of artificial feeding [8,9].

Paucity of Indian literature regarding current status of knowledge, attitude, and breastfeeding practices in mothers. Hence, this study was conducted to know the various sociocultural factors and medical factors and to evaluate current status of knowledge, attitude, and breastfeeding practices in mothers of infant of 0-12 months of age.

**MATERIALS AND METHODS****Study location**

The study was conducted in Department of Paediatrics, SMS Medical College and Attached Group of Hospitals, Jaipur.

**Study design**

This was a questionnaire-based observational study.

**Study duration**

The study duration was from February 2020 to December 2021.

**Sample size**

Sample size was calculated at 95% confidence level expecting 87% remain offering pre-lacteal feeding as one of the sociocultural factors

affecting breast feeding practices as per the reference article. At 3% absolute allowable error, the required sample size was 500 mothers having children 0-12 months of age.

#### Sampling technique

A convenient sampling technique was used to enroll the patients in study till the sample size completion.

#### Study population

All mothers of the infant of age 0-12 months brought to Department of Paediatric, SMS Medical College, and Jaipur.

#### Inclusion criteria

Mothers of the infant of age 0-12 months brought to Department of Paediatric, SMS Medical College, and Jaipur.

#### Exclusion criteria

Mothers of adopted child, surrogate mother, and mother who refused to give consent were excluded out from the study.

#### Methodology

Approval from the Institutional Ethical Committee was taken before the start of the study. Written informed consent was obtained from all the participants before commencement the study. Mothers were taken into full confidence and purpose of the study was explained to them and their cooperation for the interview sought. These selected participants were subjected to questionnaire. A ready-made performa was prepared and filled through oral questionnaires from mothers. In questionnaire, there were 25 questions related to knowledge, attitude, and practice; and each question was given 1 for yes and 0 for no. Maximum score was 25.

#### Statistical analysis

The questionnaires were initially checked for completeness and data were cleaned for errors and missing values. The corrected data were then entered into Microsoft Excel after preparing a Master-chart. Data analysis was done using licensed SPSS software version 21.0 (Chicago, Illinois, USA). Descriptive statistics were used to calculate frequencies of categorical variables, and measures of central tendencies and dispersion were used to describe continuous variables. Independent *t*-test and ANOVA test were used to compare the continuous variable and Chi-square test was used for categorical variables. Data are presented as mean  $\pm$  standard deviation or number or proportions.  $p < 0.05$  was considered as statistically significant.

#### RESULTS

Out of total 500 study participants, maximum 156 (31.2%) were in age group of 26-30 years followed by 145 (29%) in age of 18-25 years. Maximum study participants, that is, 289 (57.8%) were Hindu, followed by 129 (25.8%) Muslims. Three hundred and two (60.4%) were belonged to rural area and rest were belonged to urban area. Maximum study participants, that is, 216 (43.2%) were illiterate followed by 108 (21.6%) were educated up-to primary class. Maximum, that is, 119 (23.8%) were belonged to unskilled profession followed by 118 (23.6%) were unemployed or housewife. Three hundred and fifty-nine (71.8%) were belonged to nuclear family and 125 (25%) were belonged to joint family. Maximum study participants, that is, 325 (65%) had more than six antenatal visits. In the present study, out of 500 mothers, 384 (76.8%) had vaginal delivery and rest were delivered by LSCS. Three hundred and fifty-nine (71.8%) children were delivered in government health facilities. Two hundred and fifty-six (51.2%) children were age of 6-16 months and rest were less than 6 months of age. In the present study, out of 500 children, 276 (55.2%) were had birth weight  $< 2.5$  kg (Table 1).

Mean score of knowledge and attitude was  $11.55 \pm 4.17$ . In the present study, no statistically significant difference was found between different age group, religion, age of the children, and mode of delivery for knowledge and attitude score ( $p > 0.05$ ). Urban participants had

**Table 1: Distribution of study participants according to demographic variables and their knowledge and attitude score**

Demographic variables	n (%)	Knowledge and attitude score (mean $\pm$ SD)	P
Age group (years)			
18-25	145 (29.0)	11.48 $\pm$ 5.39	0.695
26-30	156 (31.2)	11.74 $\pm$ 3.08	
31-35	106 (21.2)	11.19 $\pm$ 3.94	
>45	93 (18.6)	11.79 $\pm$ 3.86	
Religion			
Hindu	289 (57.8)	11.05 $\pm$ 3.81	0.110
Muslims	129 (25.8)	12.51 $\pm$ 5.24	
Christian	50 (10.0)	11.74 $\pm$ 2.90	
Others	32 (6.4)	11.94 $\pm$ 3.44	
Residence			
Rural	302 (60.4)	11.46 $\pm$ 4.04	0.0001*
Urban	198 (39.6)	12.51 $\pm$ 5.24	
Occupation			
Unemployed/housewife	118 (23.6)	10.92 $\pm$ 3.40	0.034*
Unskilled	119 (23.8)	11.04 $\pm$ 4.12	
Semiskilled	71 (14.2)	11.34 $\pm$ 3.97	
Skilled	51 (10.2)	11.96 $\pm$ 4.30	
Professional	37 (7.4)	13.02 $\pm$ 6.69	
Business and other	104 (20.8)	12.05 $\pm$ 3.82	
Education			
Illiterate	216 (43.2)	10.92 $\pm$ 4.08	0.045*
Primary	108 (21.6)	11.82 $\pm$ 3.86	
Secondary	67 (13.4)	11.96 $\pm$ 4.30	
Higher secondary	55 (11.0)	12.09 $\pm$ 3.95	
Degree and above	54 (10.8)	12.48 $\pm$ 4.95	
Type of family			
Nuclear	359 (71.8)	11.09 $\pm$ 3.83	0.0001*
Joint	125 (25.0)	12.81 $\pm$ 4.78	
Three generation	16 (3.2)	12.13 $\pm$ 4.66	
Ante natal visits			
<3	85 (17.0)	10.92 $\pm$ 4.14	0.0001*
3-6	90 (18.0)	11.87 $\pm$ 4.24	
>6	325 (65.0)	12.63 $\pm$ 4.15	
Mode of delivery			
Vaginal	384 (76.8)	11.39 $\pm$ 4.16	0.111
LSCS	116 (23.2)	12.10 $\pm$ 4.19	
Place of delivery			
Government	359 (71.8)	11.39 $\pm$ 4.16	0.0001*
Private	125 (25.0)	12.81 $\pm$ 4.78	
Home	16 (3.2)	10.93 $\pm$ 4.14	
Age of children (months)			
<6	244 (48.8)	11.41 $\pm$ 4.93	0.438
6-12	256 (51.2)	11.70 $\pm$ 3.29	

\*Significant. LSCS: Lower segment caesarean section

significantly high score. A statistically significant higher knowledge and attitude score was found among participants educated degree and above. In the present study, a statistically significant knowledge and attitude score difference was found between different occupations. A statistically significant highest knowledge and attitude score was found in joint family participants. Knowledge and attitude score was significantly higher in mothers who had higher antenatal visits. Significantly higher knowledge and attitude score was found among participants delivered in private hospital (Table 1).

Pre-lacteal feed was given to 136 (12.2%) babies. Most common pre-lacteal feed, that is, 45 (33.3%) was sugar water followed by honey. Initiation of breast feeding within 1 h was started by 165 (33%) participants. Out of 335 participants who did not start breastfeeding within 1 h, among them the most common reason, that is, 178 (53.1%) was due to LSCS.

Colostrums were given by 273 (54.6%) participants. Out of 227 participants who discarded colostrums, among them, the most common reason, that is, 126 (55.5%) was advised by relative. Exclusive

breastfeeding was practiced by 302 (60.4%) participants. Out of 500 mothers, 325 (65%) were breast feed on babies demand. In our study, at 6 months, weaning was started by 172 (34.4%) participants. Four hundred and ninety (98%) mothers had knowledge about the breastfeed during illness. Artificial feed was given by 75 (15%) mothers. Most common reason for artificial breastfeeding was insufficient milk secretion, that is, 51 (68%) (Table 2).

## DISCUSSION

Breastfeeding practices vary by region and are influenced by a variety of sociocultural factors. The misconceptions that the first milk is not good or that there is no milk secretion in the first 3 days lead to activities such as discarding colostrums and pushing pre-lacteal feeding. As a result, pre-lacteal meals are promoted, increasing the risk of infection and depriving neonates of the critical advantage of colostrums feeding. Low birth weight newborns are also at risk from improper breastfeeding methods. In spite of various educational messages by mass media about breastfeeding and weaning practices, studies have shown that sociocultural factors, beliefs, and customs

play a major role in influencing mothers. Proactive interventions and education of mothers, caregivers, and staff are needed to protect and support appropriate infant and young child feeding practices.

In the present study, out of 500, maximum study participants, that is, 60.2% were in age group of 18–30 years. Similarly, 60% of mothers were reported between 21 and 25 years by Madhu *et al.* study [10]. Whereas 46.28% of mothers were belong to age group of 25–29 years in a study done by Singh *et al.* [11]. This shows that it is most common reproductive age group (21–30 years) in females.

In the present study, maximum study participants, that is, 65% had >6 visits. This study results were in accordance with Kumari *et al.* study, where 83.5% mothers had antenatal checkups [12]. Similarly, the most of the mothers, that is, 76% had received antenatal care in a study conducted by Agarwal *et al.* [13].

In the present study, only 12.8% of children received pre-lacteal feeds. Similarly less number of infants (15.2%) received pre-lacteals in Chandrasheka *et al.* study done in Nepal [14]. However, 76.0% of mothers gave pre-lacteal feeds in Chhabra *et al.* study and also in one study which was done among health professionals showed that 34% of doctors, 61.5% of nurses gave pre-lacteals as first feed to their children [15,16]. This vast difference of pre-lacteal feeds practice can be attributed to social customs prevailing in the areas and also level of education of mothers.

Among 136 babies who had been given pre-lacteal feed, the most common pre-lacteal feed, that is, 33.3% was sugar water followed by honey. Similar results of most common pre-lacteal feed in the form of sugar water were given in other studies [17,18]. In Kumari *et al.* study, honey was the commonly given pre-lacteal feed in 26.78% [12]. Jaggery water was the commonly given pre-lacteal feed in 65% cases of Sharma and Sharma study [19]. In Chhabra *et al.* study, a preparation of jaggery called “gurghutti” was the most popular pre-lacteal feed [15]. One study was done in New Delhi which gave 49.4% jaggery preparation [20]. In study done by Malini *et al.*, “Janam Ghunti” was given to neonates with the belief that it helps to prevent stomach disorder, dehydration, and acts as atonic [21].

Breast feeding initiation within 1 h was started by 33% participants in the present study. In a study done by Kumar *et al.*, 30% of mothers initiated breast feeding within in 1 h of birth [22]. Similarly, 51% mothers initiated breast feeding within 1 h in Adhisivam *et al.* study [17]. Kumar *et al.* study initiated breast feeding within 1 h and 52.6% could initiate within 1–6 h [20]. In a study done by Malini *et al.*, 78% of Santals and 48% of non-Santals initiated breast feeding with-in 6 h [21]. In contrast to these studies and present study, initiation was higher in Ram *et al.* study where 85.5% of mothers initiated breast feeding between 7 and 18 h after delivery and it was started by 100% mothers with-in 24 h and Hamdiya *et al.* study also reported 79% of mothers started breast feeding with-in 1 h [23,24].

In this study, colostrums were given by 54.6% participants. Out of 227 participants who discarded colostrums, among them most common reason, that is, 55.5% was advised by relative.

Exclusive breast feeding was practiced by 60.4% participants and out of 500 mothers, 65% were breast feed on babies demand. This high percentage of exclusive breast feeding practice on demand ranged from 80 to 90% was also reported by other studies [10,11]. The present study and other studies findings differed from the study done by Subha *et al.* in Nepal where only 26.9% of mothers breastfed on demand [25] and Rasania *et al.* study observed that 67.3% breast fed their children on demand and 32.7% breastfed their children according to a fixed schedule [26].

Exclusive breastfeeding was practiced by 60.4% participants in the present study. Chhabra *et al.* study reported 46% exclusive breastfeeding

**Table 2: Distribution of study participants according to breast feeding practice**

Breast feeding practice	n (%)
Pre-lacteal feed	
Yes	136 (12.8)
No	364 (87.2)
Type of pre-lacteal feed (n=136)	
Sugar water	45 (33.3)
Honey	36 (26.4)
Animal milk	25 (18.3)
Tinned milk	15 (11)
Others	15 (11)
Initiation of breast milk (h)	
<1	165 (33)
1–4	142 (28.4)
>4	193 (38.6)
Reason for not initiation of breast milk within 1 h (n=335)	
LSCS	178 (53.1)
Insufficient milk secretion	84 (25.1)
Lack of knowledge	75 (22.4)
SNCU admission	31 (9.3)
Colostrums feeding	
Yes	273 (54.6)
No	227 (45.4)
Reason discarding colostrums (n=227)	
Advice given by relative	126 (55.5)
Not good for baby's health	110 (48.5)
Unhygienic	34 (14.9)
Social custom	42 (18.5)
Practice of exclusive breastfeeding	
Practiced	302 (60.4)
Not practiced	198 (39.6)
Breast feeding pattern	
On demand	325 (65)
Scheduled	175 (35)
Age of weaning (months)	
<6	181 (36.2)
At 6	172 (34.4)
>6	147 (29.4)
Breast feeding during illness	
Yes	490 (98)
No	10 (2)
Artificial feeding	
Not given	425 (85)
Given	75 (15)
Reason of artificial feeding	
Insufficient milk	51 (68)
Working mother	15 (20)
Others	18 (24)

LSCS: Lower segment caesarean section, SNCU: Special newborn care units

till 4 months [15] and one study done in Bombay which reported 54.9% exclusive breastfeeding of till the end of 6 months [27]. The practice of exclusive breast feeding was less than present study was reported by many studies [10,11,28].

Artificial feed was given by 15% mothers and weaning was started at 6 months by 34.4% participants in the present study. Kalsa *et al.* study also reported similar results where 15.8% before 4 months and at the end of 6 months, 29.5% of mothers had started artificial feeding [27]. 40.6% and 4.7% of mothers in Taneja *et al.* and Muralidhar *et al.* studies, respectively, had started top feed before 4 months of age [29,30].

In the present study, the most common reason for artificial breastfeeding was insufficient milk secretion (68%). Many other studies have also reported insufficient milk production as the most common reason to start artificial feeding [27,29].

## CONCLUSION

The present study concluded that statistically significant knowledge, attitude, and practice for breastfeeding was found in mothers of urban residence, of higher education level, having good occupation, live in joint family, went for more antenatal visits, and who went for delivery at private hospital.

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## AUTHORS' CONTRIBUTION

All the authors contributed in preparing the final manuscript.

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Nil.

## CONFLICT OF INTEREST

None.

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