

To study the knowledge, attitude and practice of breastfeeding among postnatal mothers in a tertiary care center of South India

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ABSTRACT

Background: Breastfeeding is physiological and ideal way of feeding the infants. It offers complete nutrition, early protection against illness, and promotes growth and development of the infant. **Objectives:** The objectives of the study were to study the knowledge, attitude, and practice of breastfeeding among postnatal mothers and to study the demographic and socio-economic factors associated with breastfeeding practices. **Materials and Methods:** The present study was a cross-sectional study conducted at postnatal wards of a tertiary hospital of South India between October and November 2018. A total of 200 mothers in the postnatal wards were included in the study. Knowledge and attitude of the mothers was assessed using a scoring system. Socio-demographic data, antenatal care of mother, birth history, and breastfeeding details were used as domains of study. Data were analyzed using SPSS software version 20.0. **Results:** Majority (60%) of the mothers belonged to 15–25 years age group. A total of 20% of the mothers in the present study were illiterate, 51.5% of mothers were homemakers, 68% belonged to nuclear family, and 74% belonged to urban population. Among 200 postnatal mothers, 90% who delivered vaginally had knowledge regarding time of initiation of breastfeeding, 70% had knowledge regarding colostrums feeds, and 35% had knowledge regarding duration of exclusive breastfeeding. **Conclusion:** Mothers had an average knowledge regarding breastfeeding at our center. There is a need to strengthen public health education system to promote breastfeeding. Age, education, occupation, economic status, religion, and type of family were found to be significant associates of their knowledge and attitude.

Key words: Attitude, Breastfeeding, Knowledge, Mothers

Breastfeeding is a physiological and ideal way of feeding the infants. It offers complete nutrition, early protection against illness and promotes growth and development of the infants. Early initiation of breastfeeding lowers the mother's risk of postpartum hemorrhage and anemia, boosts mother's immune system and reduces the incidence of diabetes and cancer [1,2]. Non-breastfed baby is 15 times more likely to get diarrhea and 3 times more likely to get respiratory tract infection [3]. According to the WHO and UNICEF, exclusive breastfeeding (EBF) for 6 months is the single most effective child survival intervention which reduces both infant mortality and under five mortality rate in India [4].

In India, breastfeeding practices are influenced by rural/urban residence, cultural, socio-economic factors, psychological status, religious value and literacy level, and mother's employment status [5]. Breastfeeding practices have declined worldwide in recent years as a result of urbanization, socio-economic reasons, changes in living patterns, advertisements, marketing of infant milk formulae, and maternal employment outside the home [6]. The major reason for poor health outcomes among children, particularly in developing countries, is lack of EBF [7]. The

key to successful breastfeeding is information, education, and communication strategies aimed at behavior change. Very few Indian women have access to counseling services on infant and young child feeding. The main source of information to mothers is through family and friends, which is often inadequate. The current study was designed to explore the practices, knowledge, and attitude toward breastfeeding among postnatal mothers and demographic and socio-economic factors that determine them [8].

MATERIALS AND METHODS

A cross-sectional study was conducted between October and November 2018 at a tertiary hospital of South India including all the postnatal mothers who presented during this study period. The sample size was 200, calculated using purposive sampling technique, from the formula $n = z^2 pq/d^2$, where $z=1.96$, p is the number of deliveries conducted at the hospital, $q=1-p$ and $d=95\%$ confidence interval [9,10]. Mothers who were not willing to participate in the study, who were suffering from puerperal psychosis and other mental illness and mothers of babies admitted in newborn intensive care unit were excluded from the study.

After obtaining informed consent, required information was collected by interviewing mothers in postnatal wards. If any mother was found to have a lack of knowledge, negative attitude, and abnormal practice of breastfeeding, they were educated regarding breastfeeding. Knowledge and attitude was assessed using score system. A pre-tested semi-structured questionnaire was prepared based on the previous studies [7,10]. Scoring of the responses to questions was done. Score of 1 was given for the correct response and 0 for a wrong response. The total score was calculated for each mother.

The domains of study tool were socio-demographic data (education, occupation, socio-economic status, religion, family size, and family type), antenatal care (ANC) of mother (age of mother, ANC visits, and immunofluorescent assay), birth history (type and place of delivery, and birth weight), and breastfeeding details (knowledge and attitude of breastfeeding, practices such as initiation of breastfeeding, colostrum feeding, pre-lacteal feed, EBF, artificial feeding, weaning, and misconceptions regarding breastfeeding). Data were entered into Microsoft Excel and analyzed by SPSS version 20.0 for proportion, Chi-square test, mean, and standard deviation.

RESULTS

A total of 200 postnatal mothers were included in the study. There were 90% of the mothers with vaginal delivery and 70% of the mothers with cesarean section who had knowledge regarding initiation of breastfeeding. Among the demographic factors studied, statistically significant correlation was observed between literacy rate, family type, and breastfeeding knowledge ($p < 0.005$). A significant correlation also existed between literacy rate and initiation of breastfeeding, feeding of colostrums, and avoidance of pre-lacteal feeds.

A total of 28.5% of mothers, initiated breastfeeding within 1 h and out of these, 2 had delivered through lower segment cesarean section (LSCS). A total of 70% (140) mothers had knowledge regarding colostrum feeds, 35% regarding duration of EBF, and 52% had knowledge on technique of expressed breastfeeding. However, there were only 28% of mothers who gave colostrum to their babies, which may be attributed to poor attitude and practices among postnatal mothers. There were 15 mothers who delivered through LSCS and had fed their baby between 1 and 4 h of life and another 16 who delivered through LSCS had fed their baby only after 4 h of birth indicating mothers who delivered through LSCS have failed to initiate breastfeeding within 1 h of life.

DISCUSSION

Adequate nutrition during infancy is essential to ensure the proper growth, good health, and development of a child. Breastfeeding confers both short-term and long-term benefits to both mother and child. In the present study, 60% of the study population were between 15 and 25 years, which were similar to the study done by Divyarani and Patil (67%) [10] and were more than that observed by Ekambaram *et al.* (25.18%) [8]. There were 21.5% mothers

in the present study who were illiterate which was more when compared to study done by Divyarani and Patil (17.12%) [10] and Ekambaram *et al.* (15.3%) [8]. Even though our study was done at a tertiary care center, it included a greater number of illiterate mothers than the previous studies.

There were 51.5% of mothers in the present study who were homemakers which were more when compared to study done by Alamirew *et al.* (45.1%) [11] and Tadele *et al.* (30.9%) [12]. There were 68% of the mothers who came from nuclear family and 74% were from urban population which was more when compared to studies done by Divyarani and Patil [10] and Alamirew *et al.* [11]. This could be due to the study being conducted at a tertiary care center of tier-2 city. A total of 83.5% of the mothers in the present study delivered through normal vaginal delivery which was more when compared to study done by Al-Mutairi *et al.* (73%) [13], and 87.5% of babies in the present study had birth weight > 2.5 kg which was more when compared to study done by Vinay *et al.* (40.6%) [Table 1] [14].

Only 28.5% of the babies in the present study were breastfed within 1 h which was less when compared to study done by Shommo and Al-Shubrumi (70%) [15], which could be due to more number of cesarean deliveries in the present study. A total of 8% of the babies in the present study were given pre-lacteal feeds by the mother which was less when compared to study done by Tadele *et al.* (22.6%) [12] and Thomas *et al.* (13.5%) [16]. In the present study, only 18% of the babies were fed with colostrum, which was less when compared to study done by Devireddy *et al.* (80%) [17] and Thomas *et al.* (91.3%) [16]. This could be due to lesser number of mothers (28%) initiating breastfeeding within 1 h of birth [Table 2].

Table 1: Socio-demographic characters

Demographic variables	Group	n (%)
Age in years	15–20	60 (30)
	21–25	60 (30)
	26–30	45 (22.5)
	> 30	35 (17.5)
Education	Illiterate	43 (21.5)
	Primary education	60 (30)
	Secondary education	48 (24)
	PUC	21 (10.5)
Working status	Graduation and above	28 (14)
	Working	97 (49.5)
	Non-working	103 (51.5)
Family type	Joint	54 (27)
	Nuclear	136 (68)
	Three generation	10 (5)
Background	Urban	148 (74)
	Rural	52 (26)
Birth weight (kg)	≤ 2.5	25 (12.5)
	> 2.5	175 (87.5)
Type of delivery	Normal vaginal delivery	167 (83.5)
	LSCS	33 (16.5)

LSCS: Lower segment cesarean section

Table 2: Indicators of breastfeeding

Breastfeeding indicators	Groups	n (%)
Time of initiation of breastfeeding	<1 h	57 (28.5)
	1-4 h	53 (26.5)
	>4 h	90 (45)
Pre-lacteal feeds	Given	16 (8)
	Not given	184 (92)
Colostrums	Given	36 (18)
	Not given	164 (82)
Time of starting complementary feeds	4-6 months	59 (29.5)
	6-7 months	61 (30.5)
	7-8 months	80 (40)

Table 3: Knowledge and attitude of mothers on breastfeeding

Factors	% of correct responses
Time of initiation of breastfeeding	
After normal vaginal delivery	90
After LSCS	70
Knowledge about colostrum	70
Knowledge about pre-lacteal feeds	74
Water given during first 6 months of life	80
Knowledge about demand feeds	45
Knowledge about duration of breastfeeding	35
Knowledge about expressed breast milk	52
Knows benefits of breastfeeding	
To mother	50
To baby	85
Proper technique of breastfeeding	80

LSCS: Lower segment cesarean section

A total of 99% of mothers who delivered vaginally and 70% who delivered through cesarean section in the present study had knowledge regarding time of initiation of breastfeeding. There was no significant correlation between mode of delivery and knowledge regarding breastfeeding among postnatal mothers in the present study. These results were similar to the study done by Divyarani and Patil (90% and 70%) [10]. Knowledge about importance of colostrum was known by 70% of the mothers which were less when compared to study by Chinnaasami *et al* (75%) [18] and Al-Mutairi *et al.* (81.5%) [13]. A total of 74% mothers knew that pre-lacteal feeds should not be given to babies, and similar results were observed in the study done by Alamirew *et al.* (76%) [11] and Thomas *et al.* (32%) [16].

There were 35% of the mothers who had knowledge regarding duration of EBF which was less when compared to study done by Al-Mutairi *et al.* (55.6%) [13] and Mogre *et al.* (73.7%) [19]. Only 35% of mothers knew about correct duration of breastfeeding which indicates the need to strengthen the health education system and breastfeeding practices at our center. A total of 45% of the mothers had knowledge regarding breastfeeding on demand in the present study which was similar to study done by Al-Mutairi *et al.* (49.2%) [13], and lesser when compared to study done by Patel and Prajapati (81.4%) [20]. In the present study, 80%

of mothers knew that water was not necessary for babies during first 6 months of life. This was similar to the results obtained by Divyarani and Patil (85%) [10] but higher to those observed by Thomas *et al.* (54%) [16].

In the present study, 50% of the mothers had knowledge regarding benefits of breastfeeding to themselves and 80% to the babies, which was in accordance to the studies done by Divyarani and Patil (50% and 100%) [10] and Mogre *et al.* (88.4% and 95.8%) [19]. There were 30% of the mothers in the present study who had knowledge about expressed breast milk which was more when compared to the study done by Mogre *et al.* (11.1%) [19], because our study had a greater number of working mothers from urban population. There were 80% mothers in the present study who knew about proper technique of breastfeeding, whereas only 56% of the mothers knew the technique in the study done by Patel and Prajapati [20]. These variations could be due to differences in the method of sampling, socio-cultural practices of study population and economic status of participant mothers [Table 3] [10].

The study had few limitations. The major limitation was small sample size. Since, the study was conducted at a tertiary care hospital the results could not be applied to the entire community.

CONCLUSION

Mothers had an average knowledge about breastfeeding and poor breastfeeding practices at our center. There is a need to strengthen public health education system to promote breastfeeding. Age, education, occupation, economic status, religion, and type of family were found to be significant associates of their knowledge and attitude. Our study emphasizes the need to counsel mothers regarding breastfeeding practices early during antenatal visits and not postpone till after delivery.

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