

# Breastfeeding: Current knowledge, attitude, and practices among mothers in Mahbubnagar

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## ABSTRACT

**Background:** Breastfeeding is an unequalled way of providing ideal food for the healthy growth and cognitive development of infants. Many sociodemographic factors play a major role in the exclusive breastfeeding (EBF) of the infants which needs to be thoroughly understood and analyzed to achieve the WHO recommended goal of EBF. **Objectives:** The objectives of the study were to describe the breastfeeding and complementary feeding practices in the first 2 years of life and to assess the influence of cultural and socioeconomic factors. **Methodology:** This prospective study was conducted between 2016 and 2017 in the immunization clinic and postnatal ward in a medical college of South India. A closed structured questionnaire in local language on knowledge, attitude, and practice regarding prelacteal feeds, breastfeeding, and complementary feeding based on the National Family Health Survey-4 was given to mothers of 500 children aged 0–24 months. Data collected included the baseline sociodemographic characteristics, time of initiation of breastfeeding, period of EBF, continued breastfeeding following introduction of complementary foods, and type of complementary foods introduced. Data were analyzed using appropriate statistical methods. **Results:** A total of 500 mothers were included in the study. The mean age of mothers was 20.8±2.75 years. Majority of the mothers (231 out of 500) started breastfeeding within 1 h (46.3%), whereas 98 mothers (19.6%) initiated breastfeeding as late as after 24 h. Colostrum was fed to babies in 84.16% of the cases. Prelacteal feeds were given in 24.13% of cases. EBF from day 1 was started in 72% of the mothers. Majority of the mothers started complementary foods only after 6 months. **Conclusion:** This study reveals the need for health promotion to focus on the benefits of EBF for both the infant and mother. Education should target new mothers and family members as they have a strong influence on child-rearing practices.

**Key words:** Breastfeeding mothers, Colostrum, Complementary breastfeeding, Exclusive breastfeeding, Prelacteal feeds

Breastfeeding is an unequalled way of providing ideal food for the healthy growth and cognitive development of infants and it offers many advantages for children that cannot be duplicated by any other form of feeding. The WHO recommends exclusive breastfeeding (EBF) for the first 6 months of life and continuation until 2 years along with complementary foods. Nutrition in the first 1000 days (between conception and a child's second birthday) provides a unique period of opportunity for optimum child's growth and development and also establishes the foundation for good health across the life course [1]. During this period, appropriate infant and young child feeding practices are critical for the child's health and well-being [2-4].

EBF is defined as the practice of only giving breast milk to the infant for the first 6 months of life, with no other food or water added and is the cornerstone of optimum infant nutrition [5]. Notably, EBF reduces the risk of the infant to experience diarrheal diseases [2-6], upper respiratory tract infections, obesity in later life, and could improve the neurocognitive functions of the child [4]. India has high under-5 mortality (0.9 million deaths in

2016) [7], attributable to an array of factors such as poverty, poor water and sanitation, poor healthcare access, and non-EBF [8,9].

Between 2005 and 2016, the past national studies from India reported an improvement in EBF prevalence by 9 (from 46% to 55%) [10]. However, national data often mask significant variations across the regions. For example, findings from discrete subnational studies have shown that EBF varied widely in India, ranging from 36% in Meghalaya to 77% in Chhattisgarh [11]. A national study based on the analysis of the 1992 and 2006 India Demographic and Health Surveys indicated that the differences in EBF prevalence may be due to the impact of sociodemographic (higher maternal education, low household wealth status, and older maternal age, ≥35 years), health service (≥4 antenatal care visits), and community (urban residence) factors [12].

A detailed understanding of the regional prevalence along with the determinants of breastfeeding practice is essential for the decision-makers to provide locally relevant policies and resources and for public health administrators to design targeted interventions to improve EBF in India. Furthermore, understanding

factors that influence breastfeeding practices can contribute to achieving the United Nations Sustainable Development Goal 3 (SGD3) of reducing neonatal mortality to as low as 12 neonatal deaths per 1000 live births by 2030 [13]. The primary objective of this study was to describe the breastfeeding practices and complementary feeding practice in the first 2 years of life and to assess the cultural and socioeconomic factors influencing them.

## METHODOLOGY

This prospective study was conducted between 2016 and 2017 in the immunization clinic and postnatal ward in a medical college of South India. Ethical Committee clearance was obtained from the Institutional Ethical Committee. A closed structured questionnaire in local language on knowledge, attitude, and practice regarding prelacteal feeds, breastfeeding, and complementary feeding based on the National Family Health Survey (NFHS-4) was given to mothers of 500 children aged 0–24 months attending immunization clinic as well as to women who delivered live infants in postnatal ward. Informed consent was taken from all the participants before distributing the questionnaire. Mothers who had not initiated breastfeeding due to valid medical reasons were excluded from the study.

Trained field research assistants collected data on breastfeeding practice and complementary foods introduced. Home visits were made wherever necessary. The data collected included the baseline sociodemographic characteristics, time of initiation of breastfeeding, period of EBF, continued breastfeeding following introduction of complementary foods, and type of complementary foods introduced [14]. Descriptive analysis was done for elaborating the percentages. Statistical analysis was done using SPSS software. Chi-square test and Fisher's exact test was used for identifying the association between different variables.  $p < 0.05$  was considered statistically significant.

**Table 1: Time of initiation of breastfeeding (n=500)**

Time of initiation of breastfeeding (h)	Number of mothers	Percentage
<1	231	46.3
1–4	86	17.2
4–24	85	16.9
>24	98	19.6

**Table 2: Feeding practices in relation to women education and employment (n=500)**

Parameters	n (%)	Prelacteal feed n (%)	p value	Initiation of feed in 1 h	p value	Exclusive breastfeed till 6 months	p value
Literacy							
Illiterate	165 (33)	26 (19.3)	0.0001	70 (42.4)	0.0073	93 (56.36)	0.137
Primary education	97 (19.4)	17 (17.5)		35 (36)		52 (53.6)	
Secondary education and above	238 (47.6)	78 (32.8)		127 (53.3)		111 (46.6)	
Employment							
Unemployed	298 (59.6)	54 (18.12)	0.00001	144 (48.3)	0.000871	161 (54)	0.0005
Informal employed	84 (16.8)	11 (13.1)		24 (50)		52 (61.9)	
Formal employed	118 (23.6)	56 (47.46)		64 (54.2)		43 (36.4)	

## RESULTS

Out of the 500 mothers interviewed, most of the mothers were in the age group of 20–29 years (69%), while 14.7% were adolescents (15–19 years of age). About 14.2% of mothers were in the age group of 30–39 years (69%), while 2.2% were aged >40 years. The mean age of mothers was  $20.8 \pm 2.75$  years. In the present study, there was a slight male preponderance (53.5% of male vs. 46.5% of female). Majority of the mothers were primigravida (53.8%) and Hindu (60.3%). The most common mode of delivery was vaginal (83.1%). Births were most commonly assisted by a doctor or nurse (86.2%).

A total of 69.7% of mothers received 5–10 antenatal visits and 66.3% received breastfeeding assistance. A considerable proportion of births was preterm (32.9%) and 38.6% of infants were low birth weight (<2500 g). Very low birth weight (<1500 g) infants were not reported. A total of 74% of the mothers were breastfeeding. Source of information on breastfeeding was through grandmother or any other family member in 41.5% of cases, through the doctor during antenatal check-ups (ANCs) or delivery in 54.7% of cases and through health workers in 4.8% of cases.

Reason for delay in initiation of breastfeeding was perceived lactation failure in 60.3% of cases [Table 1]. Colostrum was fed to babies in 84.16% of the cases. Several factors were associated with a significant increased likelihood of feeding colostrum to the newborn infant, namely, maternal age 20–29 years, greater women's empowerment, and a reproductive history that included an abortion in their lifetime. Prelacteal feeds were given in 24.13% of cases out of which sugar, water, or honey were given in 40.4% of cases, animal or formula milk in 28.5% of cases, plain water in 20.8% of cases, and castor oil/ghee in 10.2% of cases.

Although early initiation of breastfeeding was positively related to maternal education, mothers with higher maternal education had lower EBF rates; the difference was not statistically significant [Table 2]. Women with formal employment, fixed wages, and working hours were likely to have lesser EBF rates. EBF from day 1 was started in 72% of the mothers. Breastfeeding was given on demand in 56% and every 2–3 h in 44% of cases. In mothers who gave top feeds, formula feeds were given in 36.45% and animal feeds in 63.6% of cases.

EBF was continued up to 1 month in majority of the cases (98.33% of breastfed infant). This rate has decreased in due course of time where 86.6% of the mothers continued breastfeeding till

3 months, whereas only 51.67% continued till 6 months (Fig. 1). Children of mothers who visited health facilities for ANC visits were 19% more likely to exclusively breastfeed than others.

Complementary feeds were started in 0–3 months by 16.7% of the mothers, 4–6 months in 17.5%, and the majority between 7 and 12 months (in 66.66% mothers). The causes for starting complementary feeds were crying after feeding in 16.65%, perceived increased demand in 41.7%, lactation failure in 25%, and twin pregnancy in 16.6% of cases. Mothers considered to continue breastfeeding until <6 months in 15%, up to 6 months in 18%, between 6 and 12 months in 30%, up to 18 months in 13.45%, and up to 24 months in 22.4% of cases.

## DISCUSSION

In the present study, EBF rate was 51.67% which was slightly lower than the national rate of 54.9% as per the NHFS 4 [10]. The low rate of EBF is particularly concerning given the considerable proportion of preterm and low birth weight babies in this study and makes increasing EBF an urgent priority. Initiation of breastfeeding within 1 h after birth was 48.3% as against national average of 41.5% as per the NFHS-4 as well as Telangana state average of 35.8%. The main reason for not initiating breastfeeding within 1 h was perceived lactation failure.

Colostrum was the first food in 75.18% of cases rather than prelacteal feeds and was considered healthy for the baby. Similar observation was made by Kumar *et al.* [15] in their study where 84.1% of mothers fed their baby with colostrum. The practice of prelacteal feeding was observed in 24.13% of cases which was similar to the national average of 21.1% as per the NHFS-4 and in a study by Udgiri *et al.* [16]. However, prelacteal feed rate was low in comparison to a study done by Joseph *et al.* in South India where 33.5% of cases followed prelacteal feeding [17]. This may be due to the fact that unlike the present hospital-based study, the study by Joseph *et al.* was a community-based study. Therefore, there is a constant need to continue to encourage, reinforce, and reiterate the importance of early and EBF.

In our study, though EBF was initiated by 98.33% of cases in the first 3 days, the number significantly fell after 3 months to

86.6%. However, this value was more than the national average of 58.4% till 3 months of age. EBF rates increased with increase in maternal age and these findings were in accordance to the results of the previous studies [18–22]. A range of 5–10 antenatal visits was associated with the highest percentage of EBF. In the present study, mothers, who had regular ANC visits, were 19% more likely to have good feeding practices. These findings were in contrast to the studies done by Chandhiok *et al.* and Victora *et al.* [4,20]. The benefits of breastfeeding should be emphasized during the initial antenatal visit to increase EBF rates among all mothers.

Our study indicated that birth in health facility was associated with early initiation of breastfeeding. Major source of information on breastfeeding was health personnel either during ANCs or delivery. The practice of EBF in the early postnatal period is affected by a number of factors, namely, cesarean birth, as evidenced in studies by Tewabe [23], Ogbo *et al.* [24], and Ogbo *et al.* [25], cultural practices [26,27], and influence of grandmothers [28]. Importantly, a woman's engagement with the health facility in the perinatal period remains a major determining factor in ensuring optimal infant feeding behavior and gives the woman confidence and information to challenge perceived cultural practices, myths, and belief system held toward breastfeeding in the community as described by Abolyan [29].

Our study suggests that higher maternal education was associated with lower EBF though the difference was not statistically significant. Higher maternal education is linked with increased opportunity for professional employment and subsequently improved household income as observed in the study by Skafida [30]. Mothers who are employed are less likely to engage in EBF, especially, when they work in formal employment that provides limited opportunities for optimal breastfeeding as reported by Skafida [30] and Ogbo *et al.* [26]. Notably, the Government of India has introduced various schemes (e.g., Pradhan Mantri Matru Vandana Yojana) [31] and recent amendments to the Maternity Benefit Act, 1961 (henceforth, Maternity Benefit [Amendment] Act, 2017) to improve maternal and child health, including EBF.

The amendment protects the employment of women during the time of her maternity and entitles her of a maternity benefit

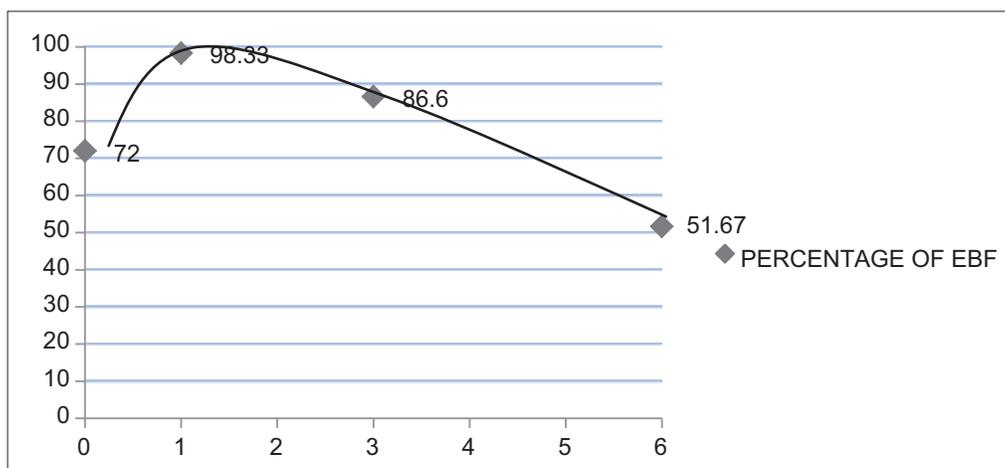


Figure 1: Change in percentage of exclusive breastfeeding with time

with paid the absence to take care of her child. It also increased the maternity leave from 12 weeks to 26 weeks and made the provision of crèche facility mandatory for every company employing more than 50 employees, with the specific target of improving the EBF [31]. Furthermore, improving EBF participation in India would also require increased girl child education as articulated in the SGDs [32] and the full implementation of the India World Breastfeeding Trends Initiative recommendations [33]. These include the establishment of the Baby Friendly Hospital Initiative centers and the provision of information support for breastfeeding, as well as strengthening monitoring and evaluation systems.

In the present study, the mothers most frequently reported discontinuation of EBF due to insufficient breast milk. This is a common phenomenon worldwide and a typical response is to give the infant supplements from a very early age as reported by Swetha *et al.* [19], Scott *et al.* [34], and Mathur and Dhingra [35]. Women should be encouraged to continue breastfeeding as maternal milk production is finely tuned to the demand of the infant and, therefore, consistent and EBF is critical for stimulating milk production as reported by Daly and Hartmann [36].

The study had few limitations. There might be recall bias associated with the timing of the interviews and social desirability bias as some respondents may have over reported EBF. The sample of mothers and infants was drawn from a single town in Southern India, in a health facility and thus limiting the generalization of this data. In addition, the study did not assess physiological, psychological, and social factors thought to influence breastfeeding. Future studies should explore family perceptions of breastfeeding, postnatal counseling, cultural and traditional practices, and nipple problems to identify where potential interventions could be initiated.

## CONCLUSION

The results of this study revealed the need for health promotion to focus on the benefits of EBF for both the infant and mother. Breastfeeding education provided during pregnancy, in postnatal wards and immunization clinics during each visit should be evaluated so that mothers learn the best techniques and benefits of breastfeeding.

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