

## Knowledge, attitude, and practices of nursing mothers toward breastfeeding in a tertiary care center in Navi Mumbai

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### ABSTRACT

**Objective:** Breastfeeding (BF) has been accepted as the most vital intervention for reducing infant mortality and ensuring optimal growth and development of a child. A major barrier to successful BF is inconsistency in information and improper cultural practices. To assess the knowledge, attitude, and practices toward BF among nursing mothers following up in a tertiary care center in Navi Mumbai, Maharashtra. **Methods:** A community-based cross-sectional study was conducted among 512 mothers in Navi Mumbai in the state of Maharashtra, India, between January 2016 and June 2016 using a pre-set questionnaire. The mothers with children under the age of 2 years were interviewed following which descriptive statistics were obtained. **Results:** Our study highlights the growing awareness of the advantages of BF. Of the 512 mothers enrolled in our study, 78.9% believed in exclusive BF (EBF) till 6 months while 51% actually practiced EBF. Nearly 78% mothers felt shy to feed in public places. BF was initiated <1 h of delivery in 35.9% mothers while insufficient milk was the predominant reason (41.4%) in mothers to stop BF before 2 years. **Conclusion:** The majority of our participants had adequate knowledge and a positive attitude toward EBF, with right posture practiced while feeding.

**Key words:** Attitude, Exclusive breastfeeding, Knowledge, Practice

Breastfeeding (BF) is nature's way of providing nutrition required for healthy growth and development of the young infant. According to WHO, "Breast milk can save more infant lives and prevents morbidity than any other intervention strategy in the world" [1]. BF is not only associated with a reduced risk of otitis media, gastroenteritis, respiratory illness, and necrotizing enterocolitis in infancy but also with obesity, and hypertension later in life. It also helps in controlling the health-care costs. Despite these benefits, its prevalence has remained low worldwide and only 1/3<sup>rd</sup> of infants are exclusively BF till 6 months of age [2].

WHO recommends that for the first 6 months of life, infants should be exclusively BF, and thereafter, infants should be given nutritionally safe and adequate complementary feeds while continuing to BF for up to 2 years or more [3]. The Government of India also promotes BF through programs like National Rural Health Mission. More so, in 1991, BF Promotion Network of India was established to protect, promote, and support BF. Poor attitudes and practices toward exclusive BF (EBF) are the major reasons for decline in the BF rate. Factors that can affect BF include ethnicity, maternal age, maternal employment, maternal education, socioeconomic status, infant health issues, maternal health, parity, method of delivery, and cultural practices [4].

Studies done in India and worldwide show declining trend of BF due to urbanization and maternal employment outside the home [2,5]. Virtually all mothers can BF provided; they have

accurate information and the support from their family, health-care system and society. Many studies are conducted to assess knowledge, attitude, and practices (KAP) of mother on BF in different parts across the country. However, no such study has been conducted in Navi Mumbai which is an urban setup and has rapidly developed over the last few decades. Therefore, we planned this study to assess the KAPs of nursing mothers toward BF in our setup.

### METHODS

This was a cross-sectional study conducted from January to June 2016 among mothers who have children below 2 years of age (inclusion criteria) attending immunization clinic and the Pediatric Out Patient Department with their children for immunization and treatment of other minor illnesses at a tertiary care hospital. Ethical committee approval was sought from the Ethics Committee of our hospital before starting the study. Sample size was calculated using the standard formula for qualitative analysis. Informed consent was taken from all the eligible mothers. The questionnaire for the study was adapted from previous studies on KAP of BF and validated by test-retest method. There was no pre-educational/motivational session or counseling provided after the questionnaire. The questionnaire comprised 26 questions divided into knowledge, awareness, and practices regarding BF.

Besides demographic and biological data, the resulting self-administered questionnaire included questions addressing knowledge (importance of colostrum, the average number of feeds the child should receive per day, up to what age the child should receive only breast milk and what age the mother should start supplementary food), questions addressing attitude (reasons for adopting BF, reasons for stopping BF, intention to BF future children, intention to participate in classes related to BF in future pregnancy and the participant self-image) and questions addressing practice (time of commencement of BF after delivery, duration of BF, difficulties in initiating BF, age of starting formula, age at which BF was stopped and preferred posture practice). Cross tabulation was used to determine univariate associations.

## RESULTS

The sample of this study (Table 1) comprised mothers with children <2 years of age (n=512) of whom, 47.4% belonged to 20-25 years age group. More than three-fourth of the participants were homemakers (76.9%). While 17.2% of the participants were illiterate, primary educated (31.6%) and secondary educated (41.7%) comprised the majority of the sample population.

The knowledge of mothers toward BF has been depicted in Table 2. The majority of the mothers (97%) had heard about EBF out of which only 78.9% knew that only breast milk should be given for the first 6 months. Only 47.4% mothers knew that BF should be started within 1 h of birth and 69.3% of mothers felt that supplemental feeding in the first 6 months is detrimental to the establishment of good milk supply. About 48.8% mothers felt they should BF on demand, but 11.7% were not sure about frequency of BF. 43.3% of the mothers knew when to give complimentary feeds, whereas 15.5% felt it should be started during late infancy. The majority (95%) of mothers unanimously agreed that BF helped in increasing mother-infant bonding followed by 83.3% who believed that BF helped in adequate weight gain of the baby. Half the mothers (53%) were aware about its role in the prevention of diarrhea followed by 52.9% who were familiar with the advantages of colostrum. Around 44% mothers had a misconception that BF can distort their figure, although 40.4% knew about the benefits of BF as a good contraceptive method.

Regarding the attitude toward BF (Table 3), 89.9% felt that BF was easier than to prepare and feed formula milk and 68% concurred that it is less expensive than formula milk. Nearly 78% mothers felt shy to feed in public places, whereas 74% mothers felt that BF has negative effect toward care of other family members. Reasons for adoption of BF include child health in 51.9% cases followed by religious background in 15.6% and cleanliness in 6.8% cases.

Regarding the practices (Table 4) of BF, 51% of mothers practiced EBF for 6 months. The position to BF was decided based on comfort of the baby in 43.5%, followed by convenience of the mother in 34.7% cases. Of the various positions, sitting on mat was preferred by 55.6% of the mothers while 21.8% preferred lying down position mostly due to caesarean section. BF was initiated <1 h of delivery in 35.9% mothers and 30%

**Table 1: Sociodemographic profile of the study population**

Demographic variables	Group	Frequency (%)
Age in years	<20	31 (6.05)
	21–25	212 (41.4)
	26–30	204 (39.8)
	>30	65 (12.6)
Marital status	Married	512 (100)
Employment	Employed	118 (23)
	Homemaker	394 (76.9)
Education	Illiterate	88 (17.2)
	Primary	162 (31.6)
	Secondary	214 (41.7)
	Pre university college	38 (7.4)
Type of delivery	Degree and above	10 (1.9)
	Normal	382 (74.6)
	Caesarian	130 (25)

**Table 2: Knowledge about breastfeeding**

Variables	Frequency (%)
Ever heard about EBF?	
Yes	499 (97.4)
No	13 (2.6)
When should breastfeeding after delivery started?	
<1 h of delivery	243 (47.4)
<6 h of delivery	154 (30)
6–48 h	115 (22.4)
For how long is EBF needed?	
<6 month	11 (2.1)
About 6 months	404 (78.9)
Beyond 6 months	97 (18.9)
Does EBF for 6 month prevent child from diarrhea?	
Yes	272 (53.1)
No	240 (46.8)
Does EBF prevent pregnancy?	
Yes	207 (40.4)
No	250 (48.8)
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(Contd...)

Table 2: (Continued)

Variables	Frequency (%)
Does EBF prevent pregnancy?	
Yes	207 (40.4)
No	250 (48.8)
Don't know	55 (10.7)
Are you aware if breastfeeding promotes mother baby bonding?	
Yes	487 (95.1)
No	25 (4.8)
Do you know breastfeeding can help reduce jaundice?	
Yes	244 (47.6)
No	268 (52.3)
Are you aware about the advantages of colostrum?	
Yes	271 (52.9)
No	241 (47)
Do you think supplemental feeding is detrimental to establishment of good milk supply?	
Yes	355 (69.3)
No	157 (30.6)
Do you know if breastfeeding helps in adequate weight gain of baby?	
Yes	427 (83.3)
No	85 (16.6)
Do you think breastfeeding can cause figure problems?	
Yes	227 (44.3)
No	285 (55.6)
Do you give night feeds?	
Yes	447 (87.3)
No	65 (12.6)
Are you aware if HIV infected mothers give breast milk?	
Yes	200 (39)
No	312 (60.9)

EBF: Exclusive breast feeding

initiated within 6 h of delivery while 22.4% had late initiation, i.e., 24-48 h. Babies were BF on demand in about half the patient (48.8%) population while 39.4% opted for scheduled feeding. Insufficient milk was the predominant reason (41.4%) in mothers to stop BF before 2 years followed by child refusal in 34.5% cases and workplace related problems in 24% of the patient population.

## DISCUSSION

The magnitude of the inverse association between urbanization and BF varies among regions with different socioeconomic and cultural backgrounds. We conducted this study in Navi Mumbai, Maharashtra, which is an upcoming city and has rapidly developed over the last few decades. It is an urban setup and has heterogeneous ethnic and socioeconomic composition.

Table 3: Attitude of respondents toward breastfeeding

Variables	Frequency (%)
Does breastfeeding have effect on care of other family members and on marital relationship?	
Yes	379 (74)
No	133 (25.9)
Do you think breastfeeding is a good way to decrease family's expenses?	
Yes	350 (68.3)
No	162 (31.6)
Do you feel shy of feeding in public places?	
Agree	404 (78.9)
Disagree	108 (21)
Is breastfeeding easier than feeding infant on formula milk?	
Yes	460 (89.8)
No	52 (10.1)
Do you top up with bottle in case of insufficient milk?	
Yes	310 (60.5)
No	202 (39.4)

In this study, the majority (97%) of the mothers were aware of EBF and 78.9% knew that EBF means giving only breast milk for 6 months and no other feeds or fluids. However, only 51% of mothers actually BF their babies through 6 months. Globally <40% of infants under the age of 6 months are exclusively BF [6]. In other studies done by Vijayalakshmi et al. [4], Oche et al. [7], Illayasu et al. [8], and Ekambaram et al. [9], EBF for 6 months was given in 33.9%, 31%, 31%, and 38%, respectively. There are studies in India which show a low prevalence (7.8-16.5%) of EBF [10,11]. However, the figure obtained in our study is much higher mostly because our cohort mostly included hospital delivery mothers receiving health talks in postnatal ward. This emphasizes the need of a strong educational awareness program to prepare the young mothers to establish a successful lactation.

In accordance with the WHO recommendations and IYCF guidelines 2006, government of India recommends initiation of BF within 1 h of birth, practicing EBF for 6 months and supplementation after 6 months. In our study, only 47.4% mothers knew that BF should be started within 1 h of birth while only 35.9% of mothers could initiate BF within 1 h of birth; these delays were mostly due to shifting the mothers from labor room, caesarean section, and lack of knowledge. The data in various studies across India show that initiation rates vary from 16% to 54.5% [12].

On inquiring about the advantages of BF, 95% of the mothers in this study agreed that BF promotes mother-baby bonding. A number of studies have enlightened about the psychological benefits for both the mother and the infant [13]. About 83.3% mothers think BF helps in adequate weight gain of baby. In study done by Mittal et al. [14], 81% were aware of nutritive benefits of breast milk. While a study done by Nigam et al. [15] showed that 60% mothers had knowledge regarding nutrition. The

**Table 4: Breastfeeding practices**

Variables	Frequency (%)
Why did you stop breastfeeding? (Before 2 years)	
Insufficient milk	212 (41.4)
Workplace related problems	123 (24)
Child refusal	177 (34.5)
What are the reasons for breastfeeding position practice?	
Comfort of baby	223 (43.5)
Convenience	178 (34.7)
Religion	111 (21.6)
Breastfeeding posture practice	
Side lying	112 (21.8)
Sitting on a mat	285 (55.6)
Sitting on a chair	95 (18.5)
Sitting on a bed	20 (3.9)
Do you know about the frequency of feeding?	
8 times/day	100 (19.5)
>8 times/day	102 (19.9)
Breastfeed on demand	250 (48.8)
Couldn't recollect	60 (11.7)
Do you know the age when to introduce complimentary food?	
3 months	95 (18.5)
6 months	222 (43.3)
12 months	115 (22.4)
24 months	80 (15.6)
What is your reason for adoption of breastfeeding?	
Religious background	80 (15.6)
Child health	266 (51.9)
Cleanliness	35 (6.8)
Other reasons	131 (25.5)
When did you initiate breastfeeding?	
<1 h of delivery	184 (35.9)
<6 h of delivery	93 (18.1)
6-24 h of delivery	141 (27.5)
24-48 h of delivery	94 (18.3)
Reasons for stopping breast milk	
Breast milk not sufficient	276 (53.9)
Problem related to workplace	36 (7)
Child refusal	118 (23)
Other reasons	82 (16)
For how long did you exclusively breastfeed?	
<6 months	118 (23)
6 months	261 (51)
1 year	76 (15)
2 years	57 (11)

advantages of colostrum were known to only 52.9% of mothers which implies the need to reinstate the importance of colostrum. On comparing with other studies in India, the importance of colostrum was known to 58% and 90% of the mother's in studies

done by Maheshwari et al. [9] and Tiwari et al. [10], respectively. Less than half (47.6%) mothers were aware that BF helps reduce jaundice. Around 44% mothers felt BF can distort their figure and 40.4% knew that BF is a good contraceptive method. 53% mothers were aware about its role in the prevention of diarrhea. In an Ethiopian study done by Tadele et al. [16], significantly less percentage (27%) of mothers knew that BF prevented diarrhea whereas similar proportion (32%) of mothers thought EBF to be a good contraceptive.

Regarding the attitude toward BF, 89.9% felt that BF was easier than giving formula milk. This could also be due to the cost factor as 68.3% felt that it is less expensive than formula milk. Around 74% mothers felt that BF has negative effect toward care of other family members. However, we feel that considering it significantly reduces sick days in infants, it actually increases the time spent by mothers with family. This aspect of BF needs to be emphasized among the mothers and society as whole. Nearly 78% mothers felt shy to feed in public places. This reflects that BF in public places is still viewed as a taboo due to conservative community attitude. Education and awareness must be imparted to the community regarding BF to eliminate the hostility among the community on women who needed to BF in public places.

Various reasons have been given for adoption of BF. The majority (51.9%) cited child health, followed by religious background in 15.6% and cleanliness in about 6.8%. In a study by Mittal et al. [14], 53.3% said they BF for child's good health and 35.8% due to religious reasons while Al-Binali et al. [17] found that religious background was the most important reason followed by child health.

In our study, 51% of the mothers practiced EBF for 6 months. However, of those who started premature supplementation, insufficient milk was the predominant reason (41.4%), refusal by the child in 34.5% cases and workplace related problems in 24% of the patient population. In a Malaysian study [18], the major reason identified for giving infant formula milk was of insufficient breast milk (48%). Studies throughout the world have identified that concern about milk supply was the most common reason women stop BF [4,18,19]. Furthermore, Ong et al. [20] showed that inadequate facility for BF at workplace significantly reduces the duration of BF among working mothers. Education for women regarding time needed for colostrum to change to mature milk and educating regarding ways of successful BF can be valuable in increasing milk supply. Mothers also need to be educated on the importance of feeding on demand to ensure an adequate supply of breast milk.

The position to BF was comfort of the baby in 43.5%, followed by the convenience of the mother in 34.7% and religion in 21.6% of mothers. Of the various positions sitting on mat was preferred in 55.6% mothers while 21.8% preferred lying down position mostly due to caesarean section. On correlating the demographic data and BF attitude, we found that in our study illiterate mothers as compared to educated mothers had positive attitudes towards BF. Similar results were seen by Vijayalakshmi et al. [4] and Dubois and Girard [21].



The limitation of this study was that most of the mothers who were interviewed were delivered in our hospital and may have benefitted by the health talks given at some point of contact. Furthermore, a larger sample size would have helped us to extrapolate the data to the population.

## CONCLUSION

Almost all mothers knew about BF and had a positive attitude toward BF, but only 1/3<sup>rd</sup> of mothers started BF within 1 h, and 51% mothers continued to exclusively BF until 6 months of age. Concern about milk supply and workplace related problems were the most common reasons for not continuing BF. Therefore, there is a need to educate and empower mothers to continue BF and to make provision for working mothers so as to facilitate BF for a longer time.

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