

# Prevalence of Exclusive Breastfeeding and Knowledge Related to Breastfeeding among Mothers Attending Vaccination Clinics and Paediatric OPD

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## Abstract

**Background:** According to World Health Organization Exclusive Breastfeeding (EBF) is, giving baby only breast milk for 6 months without adding any additional food or water. **Objectives:** This Study was done to assess the prevalence of breastfeeding among mothers attending the vaccination clinic and Outpatient Department (OPD) in tertiary care centre and assessing the challenges faced by the mothers during breastfeeding. **Materials and Methods:** This is a cross-sectional study with two types questionnaire-used, one to assess the prevalence of EBF and second to assess the knowledge related to breast feeding. Questionnaires were prepared based on one-point survey. Sample size was calculated by Daniel's formula:  $n = z \cdot \sigma$ . 500 mothers were assessed, participants divided into two groups based on whether they exclusive breastfeed their babies for 6 months or not. Chi square test for independence was done to assess the association. **Results:** A total of 500 mothers were given questionnaire who visited vaccination clinic and OPD out of these 66 mothers did not participate for questionnaire because of lack of unwillingness. Most of the mothers (250, 65.10%) said that breastfeeding was good for the baby, 230 (59.89%) mothers were aware that mother's milk composition was different from cow's milk and (72.91%) felt that prelacteals should not be given to the baby. **Conclusions:** Most of the mothers are aware that breast milk is beneficial for their baby; however, the biggest problem was anxiety regarding the amount of their breast milk. There is also a need of campaign related to harm done by prelacteals feed.

**Keywords:** EBF, Prelacteal feeds

## 1. Introduction

According to World Health Organization (WHO) EBF is giving baby only breast milk for the first 6 months without adding any additional water or food<sup>1</sup>. Complementary food should be started after the completion of 6 months and it should be continued for 2 years. Advocacy of EBF

for the first 6 months of life helps in decreasing the number of problems like pneumonia, eczema, diarrhoea. EBF helps in decreasing the burden of under five mortality. The Millennium development goal for reducing child mortality is promotion of EBF<sup>2</sup>. However, despite its unequivocal benefits, the prevalence of EBF remains less. Breastfeeding is assumed to be a traditional practice in

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India. General feeling is that Indian mothers universally breastfeed their babies; however, when it comes to EBF, the scenario is not so good. According to the National Family Health Survey4 (NFHS4), the prevalence of EBF was only 54.9% among Indian infants aged between 0 and 6 months. The problem is much worse in North Indian states, prevalence of EBF being only 16.9% in the state of Haryana NFHS4<sup>3,4</sup>. We commenced this study with an objective to assess the prevalence of breastfeeding among mothers coming to vaccination centre and OPD of a tertiary care centre. The objective is to identify the prevalence of EBF, challenges faced by mothers while feeding, and knowledge of breast feeding among mothers who were visiting vaccination clinic and OPD of a tertiary care centre.

## 2. Materials and Methods

This was a cross-sectional questionnaire based study conducted in tertiary care hospital, Jalandhar from Jan 2018 to Oct 2018 to assess the prevalence of EBF and knowledge related to breast feeding. The sample size required was estimated by Daniel's formula:  $n = z^2 pq/d$ . The prevalence of EBF was taken as 50% based on the NFHS-4. Keeping confidence interval of 95% ( $Z = 1.96$ ) and precision of 5% ( $d = 0.05$ ), the minimal sample size was estimated to be 384. Mothers whose babies were <12 months of age and who reported to vaccination clinic and OPD were included.

### 2.1 Exclusion Criteria

Neonate with a history of NICU stay beyond 24h. Similarly, babies requiring special care like oxygen therapy, supplemental feeds advised by paediatrician such as human milk fortifier, the baby not able to breastfeed due to medical or surgical issues such as Neurological deficit or cleft palate were excluded.

Ethical clearance was taken from the ethical committee while designing the study. The questionnaire was based on the review of literature done on EBF in many studies the parameters considered significant by various studies. There are 11 close ended questions in the questionnaire 1. They were communicated to mothers in their vernacular language, and the answers were translated back in English by the Doctor posted for this to fill the answer in sheet. Parameter included are, the education level of mother, whether they received counselling related to

breastfeeding or not, number of antenatal visits, nature of delivery (normal/caesarean), timing of first breastfeeding, whether or not prelacteal feeds were given, age and sex of the baby, and number of children. The presence or absence of EBF in the first 6 months of the baby was assessed. In the end of this questionnaire, they were asked an open ended question "what are the problems you faced or continue to face, while feeding your baby". Second, a separate questionnaire was given to them to assess their knowledge regarding breastfeeding. Chi Square test for independence was done to assess the association between both the groups for all the parameters recorded.

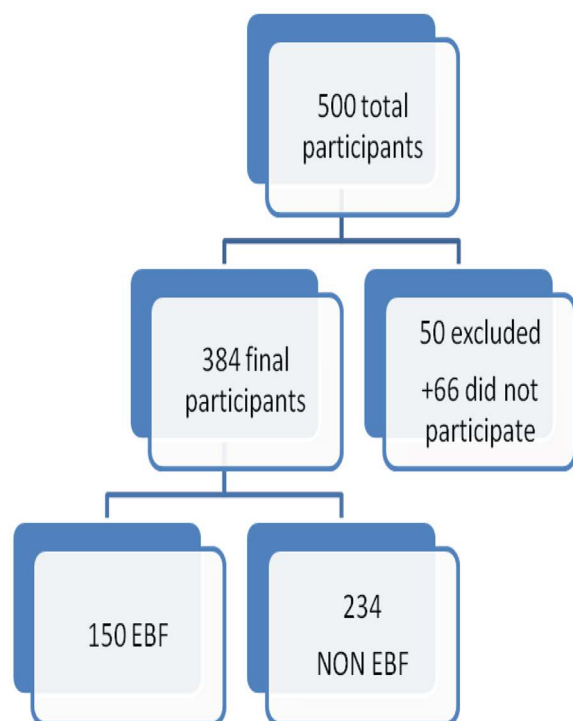
Questionnaire 1 includes: Type of delivery, Education level of mother, Birth order of index baby, Postnatal counselling regarding breast feeding, Timing of initiation of breast feeding, Prelacteals, EBF, Challenges faced, Number of antenatal visits (in relation to index baby), Antenatal counselling regarding breast feeding and EBF for 6 months (for babies more than 6 months of age).

Questionnaire 2 to assess breastfeeding knowledge includes:

1. Should you use both breasts every time or one breast at one time of breastfeeding?
2. How frequently should you feed your baby?
3. Are Prelacteals good for the baby?
4. Is the initial deep yellow milk (colostrum) good for the baby or should it be discarded?
5. Is cow milk good for the baby below 6 months?
6. What are the risks associated with bottle feeding?
7. Should mother breastfeed during illness?
8. Breastfeeding is necessary till what age?
9. EBF is necessary till what age?
10. Does a baby require water or other liquids during Initial 6 months?

## 3. Results

A total of 500 mothers were given questionnaire who visited vaccination clinic and OPD out of these 66 mothers did not participate for questionnaire because of lack of unwillingness. Among the rest, 50 had to be excluded because of predefined exclusion criteria. We had 384 mothers who participated in our study (Figure 1). The demographic profile of respondents is summarized in



**Figure 1.** Total Participants.

**Table 1.** Characteristics of exclusive breastfeeding group and nonexclusive breastfeeding group

Parameter	Category	EBF (n=150)	Non-EBF (n=234)	P
Birth order	First child	80(53.33)	147(62.82)	0.16
	second	40(26.66)	63(26.92)	
	More than second	30(20)	23(9.08)	
Timing Of breast feeding	within 1 hr	40(26.66)	50(21.36)	<0.05
	Within same day	20(13.33)	80(13.33)	
	Next day or more	90(60)	104(44.44)	
Prelacteals given	Yes	130(86.66)	200 (85.47)	0.108
	No	20	34	
Counseling regarding				
Breastfeeding	Antenatal	20(13.33)	70(29.91)	<0.05
	Postnatal	30(19.7)	30(12.84)	
Type of delivery	Normal vaginal	45(30)	90(60%)	0.09
	Cesarean	105(70)	144(61.53)	
Education level	Less than class 5	35(23.33)	29(12.39)	<0.05
	High school/intermediate	40(26.6)	115(49.14)	
	Graduate and above	80(53.30)	90(38.46)	
Number of antenatal visits	None	5(3.03)	15(6.4)	<0.05
	Irregular	120(80)	207(88.46)	
	Regular	25(16.6)	12(5.1)	

(Table 1). A total of 227 mothers were first-time mothers. Among all 384 babies, 135 babies were born through normal vaginal delivery 294 babies were delivered through caesarean deliveries, Of 384 only, 60 others had received breastfeeding counselling in the postnatal period; however, only 90 mothers remembered receiving breastfeeding counselling during antenatal visits. The prevalence of EBF in our study was 39% with 150 mothers fulfilling criteria for EBF.

Respondents were divided into two groups: EBF and non-EBF groups and tabulated the disagreement among recorded parameters (Table1). Statically test Chi Square test for independence revealed that breastfeeding counselling was the only parameter having significant association with EBF with  $P < 0.05$ . Challenges of breastfeeding faced by mothers are shown in (Table 2). The chief obstacle to EBF was mother's perception that inadequate of breast milk. Most other problems which could be handled by postnatal counselling.

The second objective of this study was to assess the knowledge related to EBF. Most of the mothers (250, 65.10%) said that breastfeeding was good for the baby, 230(59.89%) mothers were aware that mother's milk

**Table 2.** Challenges faced by mothers during breastfeeding

Challenges faced by mothers during breast feeding	(n=384) (%)
Breast engorgement	250(65.10)
Sore nipples	150(39.06)
Inverted nipple	40(10.41)
Insufficient production	300(78.12)
Baby not satisfied after feed	380(98.95)
Baby not growing well	300(78.12)
Lack of privacy and discomfort in public places	280(72.91)

composition was different from cow's milk, 110(28.64%) of mothers said that water is required during summer months, 80(28.16%) mothers felt that breastfeeding should be withheld if mother had some illness, and 210(54.68%) of the others knew that EBF is required until 6 months of age. Giving prelacteals is a traditional practice in most of the rural community, this reflected in our survey also, and 280 mothers (72.91%) felt that prelacteals should not be given to the baby<sup>10</sup>.

## 4. Discussion

WHO and The Lancet Series in 2003, emphasized that EBF and continued breastfeeding along with complementary feeding are very important determinants in child health including growth and development and even survival. Various studies also demonstrates that lack of EBF is associated with various chronic diseases, and poor academic performance has been correlated with lack<sup>5</sup> of breastfeeding. Impact of this is also seen later in life with increase in body mass index, reduced productivity, and impaired social and intellectual development. Still, EBF is not a universal practice in India. The prevalence of EBF remains well below the WHO goal of 90%. According to the NFHS4, it is 54%.

There are many factors for the shortfall in the actual rate of EBF from the desired rate are many factors. However, while few may be medical, overall breastfeeding is a social behaviour and not a medical issue as endorsed by the United Nations International Children's Emergency Fund<sup>6</sup>. The reported EBF rate in our Study was 39% which

is comparable to NFHS-4 (54.9%) and also similar to an entirely different sample population of Africa as reported by Tampah-Naah and Kumi-Kyereme<sup>7</sup>. These values are significantly higher than 30% in a rural population of Haryana as reported by Kishore et al. This study was based on door to doorstep in the rural area and our study done on mothers attending the OPD and vaccination clinic. Our study population by default was more aware and proactive regarding preventive healthcare for babies and had access to medical care unlike the rural setup. A number of variables have been noted in the literature to predict EBF practice. Among them are infant's age, maternal age, marital status, formal educational level, and occupation<sup>8,9</sup>. From our questionnaire, the most common reason for drop in EBF rate seems to be perception by mother of inadequate milk production was inadequate along with excessive crying of the baby. Some mothers were not aware about the importance of giving one breast at one time and the importance of feeding intervals and difference between foremilk and hind milk. The effect of timing of first breastfeed has been documented to be very important and time of first feed after normal delivery was 12 hr and after LSCS was 24 day. Besides, it also ensures that colostrum is received, and prelacteal feeds are avoided. Most of the mothers were aware that giving prelacteal feeds is harmful but still it is being followed. Second, there is a no false belief regarding colostrum and they think it is important for the babies<sup>11</sup>. As shown in (Table 1), only a significant difference in both groups was breastfeeding counselling education of the mother and no of antenatal visit has strong correlation with the exclusive breast feeding. All other parameters were comparable in both the groups.

Antenatal counselling related to EBF was received by only 90 out of 384 mothers, and very few among them remembered breast being examined during any of the antenatal visits. This is the major lacunae and needs to be filled. The importance of antenatal counselling has been well documented. Haider et al. showed significant improvement in rates of EBF when antenatal counselling was given. Kishore et al. have also shown that lack of counselling had significant negative influence on probability of EBF at 4 months and 6 months<sup>8,12</sup>.

According to our questionnaire regarding breastfeeding knowledge, half of the mothers were aware of the importance of colostrum but could not tell whether the baby received colostrum or not. There was a good understanding of the concept of EBF. Mothers seem to know that breast milk is

good for the baby; however, they do not appreciate the risks associated with giving the baby feeds other than breast milk. Similarly, water is considered essential by most families during the summer time. Another hindrance for EBF is the traditional wisdom among common people that cow's milk is universally healthy and harmless for everyone including newborn baby. Thirty-nine percent of the mothers had "satisfactory breastfeeding knowledge" according to the questionnaire used. This suggests a need to focus more on breastfeeding counselling starting antenatally and also introducing breastfeeding education as part of school and community education because mother's knowledge related to breastfeeding also reflects awareness among community.

Our study has some limitations because of rates of EBF vary significantly among different states. The sample size may not be adequate to pick up the impact of individual factors on the rate of EBF. A much larger sample, preferably multicentric, is required to detect the effects of other potential variables. The questionnaire used by us to assess the breastfeeding knowledge was arbitrary. To assess knowledge, a weighted scoring system should have been used, with every parameter having different score depending on its significance based on the review of literature<sup>13</sup>.

## 5. Conclusions

The information regarding breastfeeding and practice of EBF remains minimal among the North Indian mothers. Antenatal counselling for breastfeeding and continued guidance in the initial months remain negligible and if we improved it this can improve the scenario. Most mothers were aware that breast milk is beneficial for their baby; however, the biggest problem is apprehension regarding the adequacy of their breast milk. There is also a need for a extensive campaign related to harm done by prelacteals and substitutes of breast milk including cow's milk.

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