



## Assessment of Breastfeeding Practices among Mothers with Babies up to 6 Months of Age

Rujvee P Patel<sup>1</sup>, Prakash Patel<sup>2</sup>, Neeta Sharma<sup>3</sup>, Swati Patel<sup>4</sup>

**Financial Support:** None declared

**Conflict of Interest:** None declared

**Copy Right:** The Journal retains the copyrights of this article. However, reproduction is permissible with due acknowledgement of the source.

**How to cite this article:**

P Patel RP, Patel PB, Sharma N, Patel S. Assessment of Breastfeeding Practices among Mothers with Babies up to 6 Months of Age. *Natl J Community Med* 2020;11(7):314-318

**Author's Affiliation:**

<sup>1</sup>Medical Officer NHM – Surat Municipal Corporation, Surat, India; <sup>2</sup>Asst Professor; <sup>3</sup>Tutor; <sup>4</sup>Assistant Professor Cum Statistician, Dept of Community Medicine, SMIMER, Surat India

**Correspondence**

Dr. Rujvee P. Patel  
rujvee.18@gmail.com

**Date of Submission:** 21-05-2020

**Date of Acceptance:** 20-07-2020

**Date of Publication:** 31-07-2020

### ABSTRACT

**Introduction:** Breastfeeding is one of the most effective ways to ensure child health and survival. The study was conducted to assess knowledge and practices of breastfeeding in mothers with babies up to 6 months of age in Surat, Gujarat, India.

**Method:** A cross sectional study was carried out to assess the knowledge and practices of Exclusive Breastfeeding (EBF) among postpartum mothers attending immunization clinics at a Government Health Centre and affiliated Aanganwadis in Surat, Gujarat, India in the months of August to November 2019. Data was collected through face-to-face interviews using a structured questionnaire.

**Results:** In our study, it is observed that out of a total of 97 mothers, 73.20% (n=71) mothers are aware about the concept of Exclusive Breastfeeding, while only 52.58% (n=51) practice EBF. Adequate number of mothers were aware about the benefits of breast milk to the baby.

**Conclusion:** The knowledge and awareness regarding benefits of breastfeeding to the mothers, methods and criteria for breastfeeding and contraindications of breastfeeding still remains substandard.

**Keywords:** Exclusive breastfeeding, EBF, knowledge, practices, prevalence, breast milk, IMNCI, position, attachment

### INTRODUCTION

Breastfeeding is one of the most effective ways to ensure child health and survival. Breast milk is the ideal food for infants. It is safe, clean and contains antibodies which help protect against many common childhood illnesses and provides all the energy and nutrients that the infant needs for the first months of life. Breastfed children perform better on intelligence tests, are less likely to be overweight or obese and less prone to diabetes later in life. Women who breastfeed have a reduced risk of breast and ovarian cancers. WHO and UNICEF recommend that children initiate breastfeeding within the first hour of birth and be exclusively breastfed for the first 6 months of life – meaning no other foods or liquids are provided, including wa-

ter.<sup>1</sup> Every infant and child has the right to good nutrition according to the "Convention on the Rights of the Child". Under nutrition is associated with 45% of child deaths. About 40% of infants 0–6 months old are exclusively breastfed.<sup>2</sup> The Integrated Management of Neonatal and Childhood Illnesses (IMNCI) strategy, under National Rural health Mission NRHM by Ministry of Health and Family Welfare - Government of India, recommended a systematic assessment of breastfeeding and it emphasized on the counseling of the mother on the proper positioning and the attachment of the infant to the breast.<sup>34</sup> However, in almost all kinds of socio demographic groups there still remains varying degrees of lack of awareness and knowledge about Exclusive Breast Feeding, its nu-

tritional superiority and benefits to babies as well as mothers and good position - good attachment. Identifying associated factors and barriers provides information on how to improve support for lactating mothers' adherence to EBF.

## OBJECTIVES

The study was conducted to assess knowledge and practices of breastfeeding in mothers with babies up to 6 months of age in Surat, Gujarat, India.

## METHODOLOGY

A cross sectional study was carried out among postpartum mothers attending immunization clinics at a Government Health Centre and affiliated Aanganwadis in Surat, Gujarat, India in the months of August to November 2019.

Study participants were selected through a random sampling method and those who met the inclusion criteria were interviewed. The inclusion criteria were mothers of healthy infants aged 0-6 months, mothers practicing breastfeeding, and who volunteered to participate in the study. Mothers not breastfeeding their babies were excluded. A total 97 mothers were enrolled into the present study.

After obtaining permission from hospital authorities, all mothers were given an explanation of the purpose of the study. Informed consent was obtained from the mothers who were willing to participate in the study.

Data was collected through face-to-face interviews using a structured questionnaire. It took approximately 15-20 minutes to complete the structured questionnaire.

The qualitative data is represented by percentage. Participating mothers were divided in to two groups based on practice of EBF. Chi square test is applied to know the association of socio-demographic and obstetrical variables in EBF and Non EBF groups.

Based on the IMNCI criteria for breast feeding Positioning and Attachment, scoring was given to breast feeding practices of each mother. There are four criteria for good Positioning of child while breast feeding and four criteria for good Attachment of child to breast. One score was assign for each correct criteria. Mean score was used to assess association with various socio-demographic and obstetrical variables. Independent t test and ANOVA test were used to assess statistical significance. The statistical analysis is done by using SPSS 16. Over and above the aims and objectives of the study, the mothers were additionally educated

about the importance, benefits and appropriate methods of breastfeeding.

## RESULTS

This study consisted of postpartum mothers (N=97) with babies up to 6 months old attending immunization clinics in a Government Health Centre and affiliated Aanganwadis.

Table:1 highlights the prevalence of EBF, knowledge and practices. Out of a total of 97 mothers included in the study out of 99 surveyed, 37.11% (n=36) belonged to the age group up to 23 years and 62.89% (n=61) belonged to the age group above 23 years. 46 (47.42%) mothers were primiparous and 51 (52.58%) mothers were multiparous.

**Table:1 Assessment of EBF prevalence, knowledge and practices**

Variable	Babies (%)
<b>Socio Demographic details</b>	
Mother's Age	
</= 23	36 (37.11)
>23	61 (62.89)
Father's Age	
</= 23	12 (12.37)
>23	85 (87.63)
Mother's Education	
Illiterate	8 (8.25)
Primary	36 (37.11)
Secondary	40 (41.24)
Graduate	13 (13.4)
Father's Education	
Illiterate	8 (8.25)
Primary	33 (34.02)
Secondary	43 (44.33)
Graduate	13 (13.4)
BPL card	
Yes	12 (12.37)
No	85 (87.63)
Religion	
Hindu	48 (49.48)
Muslim	49 (50.52)
<b>Delivery details</b>	
Parity	
Primi	46 (47.42)
Multi	51 (52.58)
Place of Delivery	
Government Hospital	42 (43.3)
Private Hospital	55 (56.7)
Type of Delivery	
Normal Vaginal	66 (68.04)
Cesarean Section	31 (31.96)
Time of Delivery (Gestational Age)	
Pre term	10 (10.31)
Term / Post term	87 (89.69)
Age of baby (in months)	
<1	34 (35.05)
1 to 3	33 (34.02)
4 to 6	30 (30.93)

**Table 2: Assessment of knowledge and practices regarding (n=97)**

Indicators	Mothers(%)
<b>Assessment of Knowledge</b>	
Correct Knowledge about Exclusive Breast Feeding	71 (73.2)
Correct Knowledge About Benefits of breastfeeding to baby	70 (72.16)
Correct Knowledge About Benefits of breastfeeding to mother	5 (5.15)
Correct Knowledge About breastfeeding methods and criteria	36 (37.11)
Correct Knowledge About Contraindications of breastfeeding	3 (3.09)
<b>Assessment of Practice</b>	
<b>Current Practice</b>	
EBF	51 (52.58)
Not EBF	46 (47.42)
<b>Average frequency of Breast Feeding during day time</b>	
</=8	55 (56.7)
>8	42 (43.3)
<b>Average frequency of Breast Feeding during day time</b>	
</=3	67 (69.07)
>3	30 (30.93)

**Table 3: Assessment of Positioning and Attachment**

IMNCI guidelines - criteria	Mothers(%)
<b>GOOD POSITION</b>	
Body of baby well supported	64 (65.98)
Body of baby turned towards mother	66 (68.04)
Occiput, shoulder, buttocks in one line	51 (52.58)
Abdomen of baby touching abdomen of mother	48 (49.48)
<b>GOOD ATTACHMENT</b>	
Mouth of baby wide open	96 (98.97)
Whole areola in baby's mouth	93 (95.88)
Lower lip of baby everted	65 (67.01)
Chin of baby touching mother's breast	62 (63.92)

Assessment of knowledge of mothers shows that an adequate number of mothers were aware about the concept of Exclusive Breast Feeding (n=71, 73.20%) and the benefits of breastfeeding to the baby (n=70, 72.16%); moderate number of mothers were aware about the methods and criteria for breastfeeding (n=36, 37.11%) while very few mothers were aware about the benefits of breastfeeding to the mother (n=5, 5.15%) and contraindications of breastfeeding (n=3, 3.09%). Assessment of practices shows that 51 (52.58%) mothers practice Exclusive breast Feeding. Assessment of the practice of IMNCI criteria for proper positioning and attachment shows satisfactory adherence to the criteria in terms of good attachment with 96 (98.97%) mothers practicing 'mouth of the baby wide open' and 93 (95.88%) mothers practicing 'whole areola in baby's mouth'. Overall, adherence of mothers to good attachment criteria is observed to be better

than good position criteria.

Table 4 shows the association of Demographic parameters with EBF. All the respondents are divided into two groups: EBF and non-EBF groups and the difference is tabulated among recorded parameters as shown in the table. Out of the 97 mothers surveyed, a total 51 (52.58%) mothers who practice EBF; there is no significant association observed between practicing EBF and mother's age, religion, parity, delivery place, type and gestational age (P>0.05). Among the mothers, the chance of practicing EBF is 1.71 times higher in multipara as compared to primipara, which is not statistically significant. The chance of practicing EBF is 2.872 times more in mothers with full and post term babies compared to mothers with preterm babies, which is not statistically significant.

Table 5 shows the mean comparison of the score of positioning and attachment. There is no significant statistical change in mean score of positioning and attachment among the mothers with respect to practicing EBF, age, parity, mother's education, delivery place, delivery type and religion.

## DISCUSSION

Breastfeeding is a natural and ideal method for the nutrition of newborn infants. In a developing country like India, under nutrition is a significant health issue in all age groups. A majority of the population living in poverty and rural areas lack access to information and education, hence the benefits of breastfeeding are not known to all and the prevalence of breastfeeding is also low. Despite having so many benefits, EBF is yet to become a universal practice in India. The prevalence of EBF remains well below the WHO goal of 90%. According to the NFHS, it is 54.9%.<sup>5,6</sup>

The present study highlights the unsatisfactory prevalence of Exclusive Breast Feeding and its association with socio demographic factors. Among 97 mothers with babies up to 6 months of age, only 52.58% (n=51) practice Exclusive Breastfeeding; which is comparable to NFHS-4 (54.9%) and a similar study in New Delhi which reports 56% EBF prevalence and as low as 16.9% reported in the state of Haryana.<sup>5,6</sup> 58.58% of mothers practice Exclusive Breast Feeding in a similar study in and Singh et al found 80.36% mothers practice Exclusive Breast Feeding in their study which are both higher than our study.<sup>8,9</sup>

In our study, it is observed that 73.20% (n=71) mothers are aware about the concept of Exclusive Breast Feeding compared to 85.2% reported by a similar study<sup>7</sup> and 69.5% reported by another study carried out in Mandya, India.<sup>10</sup>

**Table 4: Association of Demographic parameters with EBF**

Demographic Variables	EBF (n=51)(%)	Not EBF (n=46)(%)	p value	odds ratio
Age group				
<23	20 (39.2)	16 (34.8)	0.3259	1.21
>23	31 (60.8)	30 (65.2)		
Religion				
Hindu	23 (45.1)	25 (54.3)	0.3629	0.69
Muslim	28 (54.9)	21 (45.7)		
Parity				
Multi	30 (58.8)	21 (45.7)	0.1948	1.701
Primi	21 (41.2)	25 (54.3)		
Mother's Education				
Primary	16 (31.4)	20 (43.5)		
Secondary	21 (41.2)	19 (41.3)	-	-
Graduate	9 (17.6)	4 (8.7)		
Illiterate	5 (9.8)	3 (6.5)		
Father's Education				
Primary	19 (37.3)	14 (30.4)	-	-
Secondary	18 (35.3)	25 (54.3)		
Graduate	8 (15.7)	5 (10.9)		
Illiterate	6 (11.8)	2 (4.3)		
Delivery place				
Government Hospital	25 (49)	17 (37)	0.2318	1.64
Private Hospital	26 (51)	29 (63)		
Type of Delivery				
Cesarean Section	12 (23.5)	19 (41.3)	0.06	0.4372
Normal Delivery	39 (76.5)	27 (58.7)		
Time of Delivery (Gestational Age)				
Full, Post term	48 (94.1)	39 (84.8)	0.2405	2.872
Pre	3 (5.9)	7 (15.2)		

**Table 5: Mean comparison of Score of positioning and attachment**

Variables	N	Mean	Std. Deviation	P- value
EBF				
No	46	5.5	2.41	0.746
Yes	51	5.66	2.60	
Age				
<23 years	36	5.77	2.66	0.569
>23 years	61	5.47	2.42	
Parity				
Primi	46	5.93	2.53	0.197
Multi	51	5.27	2.46	
Mother's Education				
Primary	36	5.94	2.27	0.492
Secondary	40	5.12	2.75	
Graduate	13	6	2.51	
Illiterate	8	5.62	2.19	
Total	97	5.58	2.50	
Delivery Place				
Government Hospital	42	5.23	2.73	0.232
Private Hospital	55	5.85	2.31	
Delivery Type				
Cesarean Section	31	5.58	2.48	0.985
Normal Delivery	66	5.59	2.53	
Religion				
Muslim	49	5.75	2.60	0.509
Hindu	48	5.41	2.42	

Our study reports that 72.16% (n=70) mothers were aware about the benefits of breastfeeding to the baby as compared to a similar study which reports 91% mothers aware about the benefits of breast-

feeding<sup>5</sup> and 92% reported by another study carried out in Mandya, India.<sup>10</sup>

Based on our assessment of knowledge of mothers regarding breastfeeding overall, it is evident that

there isn't sufficient knowledge regarding the concept of Exclusive Breast Feeding, benefits to the baby, methods and criteria and very poor knowledge regarding benefits of breastfeeding to mother and contraindications of breastfeeding among the mothers surveyed, which can be improved by antenatal as well as post natal counseling of delivering mothers.

## CONCLUSION

The knowledge regarding breastfeeding overall remains suboptimal among the mothers who have delivered babies in the last 6 months in Surat, Gujarat. Majority of mothers were aware about the benefits of breast milk to the baby; however, the knowledge and awareness regarding benefits of breastfeeding to the mothers as well as the prevalence of practicing EBF still remains low and has no significant association with socio demographic factors such as mother's age, religion, parity, delivery place, type and gestational age.

## Acknowledgement

We wish to express great appreciation for and immense gratitude to Dr. Dhvani Patel (M.B.B.S., D.P.H), Junior Medical Officer - Rander Urban Health Centre, Surat, India; for their patient guidance, encouragement and logistical support throughout the process of data collection for this research; and the paramedical and administrative staff of Rander Urban Health Centre, Surat, India for the logistical support.

We would like to extend our thanks to Ms. Aarohi Vashi (3<sup>rd</sup> year PharmD) for their support and assistance in the process of data collection for this research.

We would also like to extend our thanks to the Department of Community Medicine, SMIMER (Surat Municipal Institute of Medical Education and Research), Surat, India.

## REFERENCES

1. WHO. Breastfeeding - Overview, Recommendations. Available on [https://www.who.int/health-topics/breastfeeding#tab=tab\\_1](https://www.who.int/health-topics/breastfeeding#tab=tab_1). Accessed on April 30 2020.
2. WHO. Fact sheet - Infant and young child feeding. Available on <https://www.who.int/en/news-room/fact-sheets/detail/infant-and-young-child-feeding>. Accessed on April 30 2020.
3. The Breastfeeding Practices: The Positioning and Attachment Initiative Among the Mothers of Rural Nagpur. Available on [https://www.jcdr.net/articles/pdf/2439/24%20-%204704\\_E\(C\)\\_PF1\(R\)\\_F\(P\)\\_PF\(A\).pdf](https://www.jcdr.net/articles/pdf/2439/24%20-%204704_E(C)_PF1(R)_F(P)_PF(A).pdf). Accessed on April 30 2020.
4. Integrated management of neonatal and childhood illness: Training modules for medical officers. New Delhi: 2005. Government of India, Ministry of Health and Family Welfare.
5. Prevalence of exclusive breastfeeding and knowledge related to breastfeeding among mothers attending immunization center and well-baby clinic. Available on <http://www.actamedicainternational.com/article.asp?issn=2349-0578;year=2018;volume=5;issue=2;spage=79;epage=83;aulast=Roy>. Accessed on April 30 2020.
6. National Fact Sheet, India 2005-2006 National Family Health Survey (NFHS-3). Available on <http://www.nfhsindia.org/pdf/IN.pdf>. Accessed on April 30 2020.
7. Knowledge, attitudes, and breast feeding practices of post-natal mothers: A cross sectional survey. Available on <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4682591/>. Accessed on April 30 2020.
8. Breastfeeding practices among lactating mothers of a rural area of central India: a cross-sectional study. Available on [https://www.researchgate.net/publication/329172750\\_Breastfeeding\\_practices\\_among\\_lactating\\_mothers\\_of\\_a\\_rural\\_area\\_of\\_central\\_India\\_a\\_cross-sectional\\_study](https://www.researchgate.net/publication/329172750_Breastfeeding_practices_among_lactating_mothers_of_a_rural_area_of_central_India_a_cross-sectional_study). Accessed on April 30 2020.
9. Breastfeeding practices among lactating mothers: Problems and prospects in a cross-sectional study. Available on [https://www.researchgate.net/publication/307836639\\_Breastfeeding\\_practices\\_among\\_lactating\\_mothers\\_Problems\\_and\\_prospects\\_in\\_a\\_cross-sectional\\_study](https://www.researchgate.net/publication/307836639_Breastfeeding_practices_among_lactating_mothers_Problems_and_prospects_in_a_cross-sectional_study). Accessed on April 30 2020.
10. Assessment of knowledge, attitude and practice of breastfeeding among postnatal mothers at Mandya Institute of Medical Sciences, Mandya, India. Available from <https://www.ijpediatrics.com/index.php/ijcp/article/view/275/270>. Accessed on April 30 2020.