Research Article

Assessment of exclusive breastfeeding practice and related barriers: A hospital-based study

Roshan Kumar Agrawal, Satyendra Prasad Singh, Sofia Noor

Department of Community Medicine, Late Shri Lakhiram Agrawal Memorial Government Medical College, Raigarh, Chhattisgarh, India

Correspondence to: Roshan Kumar Agrawal, E-mail: roshan_agrawal61@yahoo.com

Received: May 03, 2019; **Accepted:** May 24, 2019

ABSTRACT

Background: The World Health Organization recommends the practice of exclusive breastfeeding (EBF) of infants for the first 6 months after birth. It is the simplest, healthiest, and least expensive method that fulfills the infant's nutritional requirement, and it plays an important role in reducing the child mortality and morbidity. Although breastfeeding is a common practice in India, most of the people do not properly understand the importance of the knowledge about breastfeeding how it should be given the timings, duration, correct techniques, and appropriate time of weaning mother's milk. **Objective:** The objectives were to identify the prevalence of EBF, association with demographic characteristics, and reasons of nonadherence on EBF among the mothers of children <2 years of age. **Materials and Methods:** This cross-sectional study was carried at the immunization clinic of Late Shri Lakhiram Agrawal Memorial Government Medical College, Raigarh, Chhattisgarh, for 2 months. Mothers who came to the immunization clinic for vaccination with infants aged <2 years were interviewed. A total of 412 mothers were included in this study. Data analysis was conducted using SPSS version 10.0 software. **Results:** Our study showed that the prevalence of EBF practice was 53.88%. Factors found significant to influence EBF practice are the type of family, time of initiation of breastfeeding, colostrums given, mother's age, and education. Main barriers for EBF practice were found to be resumption of work, milk insufficiency, and too painful during feeding. **Conclusion:** Universally it is accepted that breast feeding is best for infants as well as for mothers. The prevalence of EBF is not satisfactory among mothers. This study is focused on an urgent need of educating the mothers to feed their newborn child in the first 30 min and continues it to the first 1/2 year age of the child without any external supplements. This study highlights the need to educate mothers regarding breastfeeding during their antenatal and postnatal checkup visits.

KEY WORDS: Exclusive Breastfeeding; Infants; Mothers; Immunization

INTRODUCTION

It is proved by various research that survival, optimal growth, physical development and prevention of infections are the most challenging issues of infants, particularly in the first 6 months of life. Under most circumstances, breast milk is the ideal food for the infant to fulfil all these three needs because breast milk contains proteins, carbohydrates, and essential fats. Many researches have proved that breast milk is having important immunological factors which are required to resist infection in early life.

Exclusive breastfeeding (EBF) in the first 1/2 year of the newborn life is very effective to fulfill nutritional requirement of a child. The World Health Organization (WHO) defined "EBF" as exclusive intake of breast milk by an infant from

Access this article online	
Website: http://www.ijmsph.com	Quick Response code
DOI: 10.5455/ijmsph.2019.0513824052019	

its mother or wet nurse or expressed milk with addition of no other liquid or solid with the exception of drops or syrups consisting of vitamins, minerals supplements, or medicine and nothing else for the first 6 months.[1]

Several morbidities such as diarrhea, pneumonia, ear infections, allergies, necrotizing enterocolitis, and sudden infant death syndrome of infant can be protected by EBF.[2] To decrease infant mortality rate, EBF has been found as a most effective intervention, whereas non-EBF in the first 1/2 year of life contributes approximately 10% of the disease burden in children of age <5 years and 1.4 million deaths.[3]

The contribution of EBF to infant's health is particularly important in the context of a developing country like India, which is facing heavy burden of communicable and non-communicable diseases. Although the infant mortality rate of India has declined to 34 in 2016 from 164 in 1960, which is still very high in comparison to several other developed countries.[4]

It is seen that many child having age <6 months, in addition to breast milk, are given some other substitutes in the starting age such as boiled water and cow milk. This type of other substitution does not fulfill the required nutritional needs of the baby. It also leads to baby toward malnutrition which is the main reason for increase of morbidity rate and mortality rate. In India, breastfeeding practices vary among different regions and communities based on their different social and cultural thoughts as well as economical factors.

It is seen in several studies that many mothers are not able to perform the EBF due to the many reasons, for example, not having the sufficient milk, having extensive workload, surgical pain, sore nipples, not having knowledge of breastfeeding, lack of family support, etc., it is also observed that the mothers of rural area are having the practice if work in fields in daily payment basis to fulfill the requirements of their daily life, but these mothers are not having any facilities like maternity leave because they are bound to work.

The objectives were to find out the prevalence of EBF, association with demographic characteristics, and reasons of non-adherence on EBF among the mothers of children <2 years of age.

MATERIALS AND METHODS

The present study was a cross-sectional study carried out at the immunization clinic of Late Shri Lakhiram Agrawal Memorial Government Medical College, Raigarh, Chhattisgarh, from January to February 2019. All those mothers who are visit in to the immunization clinic for vaccination of their children were interviewed based on a predesigned, pre-tested questionnaire regarding demography, type of delivery, initiation time of breastfeeding, colostrums given, and barriers in non-adherence to EBF after verbal consent was taken. A total of 412 mothers with convenient sampling were included in this study. All those who are willing to participate were included. Date was compiled in MS Excel, whereas analysis was conducted using SPSS software 20.0.

RESULTS

As per the analysis of 412 mothers reaching for immunization at immunization center of Late Shri Lakhiram Agrawal Memorial Government Medical College, Raigarh, Chhattisgarh, we found the prevalence of EBF was 53.88%, which is clearly shown in Table 1.

Whereas analysis of demographic data mention in Table 2 gives the result that out of 412 participants, 81.55% of the participants were belonged to Hindu communities, of which 53.27% was involved in EBF. Furthermore, socioeconomic status of the participant shows that 43.69% of mothers belong to upper lower class, of which 51.11% are having EBF practice. At last, if we see type of delivery then we found that 67.72% are having normal delivery, of which 55.56% engaged in EBF. However, Chi-square analysis of all the above variables is not significant with EBF.

Similarly, when we talked about type of family, then we found that, 66.75% of the participants are residing in joint family, of which 45.82% of mothers were performing EBF. Moreover, if we analyze as per the initiation time of breastfeeding then 65.29% of the mothers who have initiated breastfeeding within the first 30 min, of which 67.66% continues with EBF. When we consider the variable colostrums given or not then we found that 88.35% of mothers have given colostrums to their child and 57.69% of them continue EBF. Furthermore, we take age of mother in account then 37.86% of mothers are having age between 22 and 25 years, of which 44.23% of mothers continue the EBF. At last, if we see mother education then 53.64% of mothers are having their education between primary to secondary level, of which 42.53% engaged in EBF and Chi-square analysis of all the above variables is significant with EBF.

In addition, if we observe Table 3 which contains the data regarding the barriers in EBF then we found three main barriers which are resumption of work, i.e., 27.37%, painful during feeding, i.e., 23.53%, and insufficiency of milk, i.e., 21.05%. Very less percentage of mothers have reported that

Table 1: Prevalence of exclusive breastfeeding

Exclusive breastfeeding	Frequency (%)
Yes	222 (53.88)
No	190 (46.12)
Total	412 (100)

Table 2: Association of sociodemographic variables with exclusive breastfeeding

Variable	Exclusive breastfeeding		Total (%)	χ^2	*P*
	Yes (%)	No (%)			
Religion					
Hindu	179 (53.27)	157 (46.73)	336 (81.55)	0.93	0.625
Muslim	21 (61.76)	13 (38.24)	34 (8.25)		
Others	22 (52.38)	20 (47.62)	42 (10.20)		
Type of family					
Nuclear	96 (70.07)	41 (29.93)	137 (33.25)	21.64	<0.001
Joint	126 (45.82)	149 (54.18)	275 (66.75)		
Socioeconomic status					
II	6 (66.67)	3 (33.34)	9 (2.18)	7.54	0.056
III	41 (45.56)	49 (54.44)	90 (21.84)		
IV	92 (51.11)	88 (48.89)	180 (43.69)		
V	83 (62.41)	50 (37.59)	133 (32.28)		
Time of initiation of breastfeeding					
Within 30 min	182 (67.66)	87 (32.34)	269 (65.29)	69.17	<0.001
30–60 min	21 (47.73)	23 (52.27)	44 (10.68)		
1–2 h	4 (18.18)	18 (81.82)	22 (5.34)		
>2 h	15 (19.48)	62 (80.52)	77 (18.69)		
Colostrums given					
Yes	210 (57.69)	154 (42.31)	364 (88.35)	18.24	<0.001
No	12 (35.00)	36 (75.00)	48 (11.65)		
Delivery type					
LSCS	67 (50.38)	66 (49.62)	133 (32.28)	0.97	0.324
NVD	155 (55.56)	124 (44.44)	279 (67.72)		
Mother's age (years)					
<21	29 (45.31)	35 (54.69)	64 (15.53)	19.97	<0.001
22–25	69 (44.23)	87 (55.77)	156 (37.86)		
26–30	93 (68.89)	42 (31.11)	135 (32.77)		
>30	31 (54.39)	26 (45.61)	57 (13.83)		
Mother's education					
Illiterate	77 (58.78)	54 (41.22)	131 (31.80)	36.09	<0.001
Primary to secondary	94 (42.53)	127 (57.47)	221 (53.64)		
Graduation and above	51 (85.00)	9 (15.00)	60 (14.56)		

LSCS: Lower segment cesarian section, NVD: Normal vaginal delivery

Table 3: Frequency distribution of exclusive breastfeeding barriers

Reasons of not adhering to exclusive breastfeeding	Frequency (%)
Resumption of work	52 (27.37)
Milk insufficiency	40 (21.05)
Baby not satisfied	15 (7.89)
Unwillingness of baby to suckle	30 (15.79)
Medical complication	14 (7.37)
Too painful	39 (20.53)
Total	190 (100)

there are some other barriers also because of which they are not able to continue breast feeding till 6 months such as baby is not satisfied with breast milk, baby is not able to suck, mothers are having some medical complications etc.

DISCUSSION

In our study, we found that the prevalence of EBF was 53.88% which is quit better than the prevalence quoted by Bhanderi *et al*.[5] for central Gujarat, i.e., 49.7% and below then the study was done by Mise *et al*.[6] which quoted 63.4% for Karnataka.

Factors such as religion, type of family, socioeconomic status, time of initiation of feeding, colostrums given, mother's age, and education were explored in this study.

Moreover, in demographic data of our study such as religion, socioeconomic status, and delivery type are not having any impact in EBF. In other words, all these variables are found to be statistically insignificant which is strongly supported by Patel *et al*.[7] and Radhakrishnan and Balamuruga.[8] Whereas, if we compare the variable religion and delivery type then our result is against the Bhanderi *et al*.,[5] i.e., in our study, 81.55% of the total sample belongs to Hindu religion, of which 53.27% of mothers are engaged with EBF, and in their study, 49.2% of total 90.6% of Hindu mothers are engaged in EBF, and in our study, 67.72% of the total sample having normal delivery, of which 55.56% of mothers are engaged with EBF, and in their study, 53.4% of total 80.6% of normally delivered mothers are engaged in EBF. However, same study is supporting our study for socioeconomic status.

This study has highlighted that there is significant association of EBF with type of family, breastfeeding initiation time, mother's age, and education.

When we compare study for association of EBF with type of family, then the finding of Basu *et al*.[9] finding is in support of our study, whereas the study conducted in Mysuru[10] and Turkey[11] did not find type of family being associated with EBF. These variations may result from the role played by the decision makers who are deferent in nuclear and joint family.

According to the WHO IYCF guidelines recommended that all mother should start breastfeeding to their newborn immediately, the current study proves that breastfeeding initiation time is highly significant with EBF. It means all mothers those who have not started breastfeeding to their child immediately after birth is having problem to continue EBF which is supported by the similar type of study.[12-14]

Result of our study is obtained as mothers age is having an impact on EBF which is supported by the studies conducted in rural south India[15] and rural Uttar Pradesh.[16] On the contrary, a study conducted in the other part of the Gujarat did not find maternal age associated with EBF.[17]

It was noted from our study that the education level of mother having much influence on EBF which is supported by the research conducted in the Philippines[16] that education plays a significant role in EBF.

The main barriers for the EBF found in our study are resumption of work, i.e., 27.37%, painful during feeding, i.e., 23.53%, and insufficiency of milk, i.e., 21.05% which is supported by Parmar *et al*.[18] whose finding shows various reasons for non-adherence to EBF such as insufficiency of breast milk (59.7%), work overload (13%), and medical complication (6.5%). A study by Aggarwal *et al*.[19] and Parekh *et al*.[20] has also found same type of barriers.

CONCLUSION

Nowadays, it is a universal truth that breast milk is the best infant feed which is essential for baby as well as mothers for the health point of view. In the developing countries like India, where different kinds of cultural, social, economical, and regional barriers are present, due to that the prevalence of EBF is not satisfactory among mothers in the study area. Hence, there is an urgent need of educating the mothers to feed their newborn child in the first 30 min and continues it to the first 1/2 year age of the child without any external supplements. At the same time, all the mothers should also be educated about the importance of colostrums feed, initiation time. All the health workers like Accredited social health activist (ASHA) should encourage antenatal and postnatal females regarding importance of breastfeeding during door to door visits.

REFERENCES

1. WHO/UNICEF, Innocenti Declaration: On Infant and Young Child Feeding. Celebrating Innocenti 1990-2005: Achievements, Challenges and Future Imperatives Florence, Italy: WHO; 2005. Available from: http://www.innocenti15.net/declaration.pdf. [Last accessed on 2018 Nov 18].
2. Ip S, Chung M, Raman G, Chew P, Magula N, DeVine D, *et al.* Breastfeeding and maternal and infant health outcomes in developed countries. Evid Rep Technol Assess (Full Rep) 2007;153:1-86.
3. Black RE, Allen LH, Bhutta ZA, Caulfield LE, de Onis M, Ezzati M, *et al.* Maternal and child undernutrition: Global and regional exposures and health consequences. Lancet 2008;371:243-60.
4. The World Bank. Mortality Rate, Infant (per 1,000 livebirths) All Countries and Economies. Available from: https://www.data.worldbank.org/indicator/SP.DYN.IMRT.IN. [Last accessed on 2018 Oct 04].
5. Bhanderi DJ, Pandya YP, Sharma DB. Barriers to exclusive breastfeeding in rural community of central Gujarat, India. J Family Med Prim Care 2019;8:54-61.
6. Mise PJ, Mise SJ, Siddappa M. Study of breastfeeding practices and problems among postnatal mothers: A hospital based study. Int J Reprod Contracept Obstet Gynecol 2017;6:3343-6.
7. Patel DV, Bansal SC, Nimbalkar AS, Phatak AG, Nimbalkar SM, Desai RG, *et al.* Breastfeeding practices, demographic variables, and their association with morbidities in children. Adv Prev Med 2015;2015:892825.
8. Radhakrishnan S, Balamuruga S. Prevalence of exclusive breastfeeding practices among rural women in Tamil Nadu. Int J Health Allied Sci 2012;1:64-7.
9. Basu P, Chakrabortty A, Dasgupta U, Bhattacharya K, Sarkar AK. Factors influencing exclusive breastfeeding up to six months of age in a rural community of North 24 Parganas, India. Indian J Nutr 2019;5:1-17.
10. Polineni V, Boralingiah P, Kulkarni P, Manjunath R. A comparative study of breastfeeding practices among working and non-working women attending a tertiary care hospital, Mysuru. Natl J Community Med 2016;7:235-40.

11. Yılmaz E, Öcal FD, Yılmaz ZV, Ceyhan M, Kara OF, Küçüközkan T, *et al.* Early initiation and exclusive breastfeeding: Factors influencing the attitudes of mothers who gave birth in a baby-friendly hospital. Turk J Obstet Gynecol 2017;14:1-9.
12. Chien LY, Tai CJ. Effect of delivery method and timing of breastfeeding initiation on breastfeeding outcomes in Taiwan. Birth 2007;34:123-30.
13. Meedya S, Fahy K, Kable A. Factors that positively influence breastfeeding duration to 6 months: A literature review. Women Birth 2010;23:135-45.
14. Saeed G, Fakhar S, Imran T, Laila L, Abbas K. The effect of modes of delivery on infants' feeding practices. Iran J Med Sci 2011;36:128-32.
15. Nishimura H, Krupp K, Gowda S, Srinivas V, Arun A, Madhivanan P. Determinants of exclusive breastfeeding in rural South India. Int Breastfeed J 2018;13:40.
16. Verma A, Dixit P. Knowledge and practices of exclusive breastfeeding among women in rural Uttar Pradesh. J Neonatal Biol 2016;5:228.
17. Chudasama RK, Patel PC, Kavishwar AB. Breastfeeding initiation practice and factors affecting breastfeeding in South Gujarat region of India. Internet J Fam Pract 2008;7:49-53.
18. Parmar VR, Salaria M, Poddar B, Singh K, Ghotra H, Sucharu, *et al.* Knowledge, attitudes and practices (KAP) regarding breast feeding at Chandigarh. Indian J Public Health 2000;44:131-3.
19. Aggarwal A, Arora S, Patwari AK. Breastfeeding among urban women of low-socioeconomic status: Factors influencing introduction of supplemental feeds before four months of age. Indian Pediatr 1998;35:269-73.
20. Parekh C, Bavdekar SB, Shaharao V. Study of infant feeding practices: Factors associated with faulty feeding. J Trop Pediatr 2004;50:306-8.

How to cite this article: Agrawal RK, Singh SP, Noor S. Assessment of exclusive breastfeeding practice and related barriers: A hospital-based study. Int J Med Sci Public Health 2019;8(8):623-627.

Source of Support: Nil, **Conflict of Interest:** None declared.