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Original Research Article

Prevalence and determinants of cessation of exclusive breastfeeding among primi-para rural Indian mothers

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ABSTRACT

Background: Breast milk is first, natural and nutritious food for newborn that promote sensory and cognitive development as well as protect against infectious and chronic diseases. The aim and objective of the study was to estimate the prevalence and to point out determinants of cessation of exclusive breastfeeding among rural primi-para mothers.
Methods: This is a hospital based cross sectional study conducted at rural tertiary health centre located Western Maharashtra, India in the month of November-December 2017. A total of 140 breastfeeding primi-para mothers were enrolled and interviewed by utilizing pretested questionnaire include socio-demographic data, obstetric and breastfeeding history after written consent. Data were analyzed for inferential statistics using SPSS Version 21.
Results: Among 140 eligible mothers, max. 84.2% were in age group 18-24 years with high proportions, 72.8% housewives, 90% literate and 75.7% with joint family structure. Max. 92.1% mothers were institutionally delivered. The overall prevalence of cessation of exclusive breastfeeding was 22.85% with gradual and sudden cessation was 20% and 2.85% respectively. Maternal determinants like insufficient breast milk secretion (37.5%), maternal sickness (12.5%) were highly contributed for cessation of breastfeeding whereas, infant illness, 12.5% respectively. The nuclear family structure, caesarean delivery and low birth weight baby were significantly associated with cessation of exclusive breastfeeding. The risk of cessation of exclusive breastfeeding is of 4.5 and 2.5 times higher with maternal nuclear family structure and infant with low birth weight.
Conclusions: Prevalence of cessation of exclusive breastfeeding was low among primi-para mothers residing in rural area of western Maharashtra, India. The nuclear family structure, low birth weight baby have had significant effect on cessation of exclusive breastfeeding.

Keywords: Prevalence, Breastfeeding, Primi-para, Cessation, Determinants

INTRODUCTION

Breastfeeding is a unique and unparalleled way of providing ideal food for healthy growth and development of infants. The World Health Organization (WHO) and United Nations International Children's Emergency Fund (UNICEF) recommends optimal way of exclusive breastfeeding during the first six months of life and combined with complementary foods until the age of two years or older, but only a minority of Indian infants are breastfed in accordance with these recommendations.[1] The benefits of exclusive breastfeeding reduces infant mortality due to common childhood illnesses such as diarrhoea or pneumonia, and helps for a quicker recovery during illness are well established particularly in poor environments too.[2,3]

A mother's intention to breastfeed is one of the strongest predictors of breastfeeding initiation. Earlier studies have documented cessation of breastfeeding but reasons vary by infant age, parity and geographical distribution.[4] However; reasons that primi-para mothers do not meet their desired breastfeeding have not been identified in those studies. As per recent data (NFHS-4 Government of India, 2015-16), the prevalence of exclusive breastfeeding (EBF) was reported 54.9% with significant improvement as compared to NHFS-3.[5] The concerns, challenges, and demands of breastfeeding that were not anticipated during the prenatal period may affect a mother's decision to continue breastfeeding.[6,7]

It is equally important to understand mothers' as well as infant's reasons for early cessation of breastfeeding that are associated with not meeting their desired breastfeeding goals and rights, so that interventions can be designed to reduce discrepancies between intended and actual breastfeeding behaviours. The present study aimed to insight the existing behaviour of mothers regarding breast feeding, to estimate the prevalence of cessation of EBF and its determinants among the primi-para mothers attending the rural tertiary care hospital situated in rural area of Maharashtra, India. The results of this study would be incorporated during the prenatal period which may change the mother's decision to continue breastfeeding.

METHODS

It is a hospital based cross sectional study which was conducted at Krishna Hospital and Medical Research Centre (KHMRC), Karad which is located in rural area of western Maharashtra state of India. The hospital caters speciality as well as super-speciality health care services to population residing in rural area. Study was planned in the month of November-December 2017 and participants were rural primi-para lactating mothers completed duration of exclusive breastfeeding i.e. more than six months, attending immunisation clinic of KHMRC Karad. Sample size taken for this study was a total of 140 breastfeeding mothers, who were attending the immunisation session at KHMRC during study period and mainly confined to rural habitations. The sample size was selected by using time bound, non probability sampling technique.

A questionnaire was structured; pretested and designed that included socio-demographic data, obstetrics history and breast feeding history. The data were collected by personal interview method utilizing structured questionnaire in the immunization clinic in the presence of staff nurse. Details of the research project were explained to each respondent and written consent was obtained to participate in the study ethically. The confidentiality of information and storage of data was also practiced ethically. Data was coded and decoded and entered into Microsoft Excel 2010 and analyzed by using descriptive and inferential statistics. The association was determined by using χ^2 tests and significance was considered if p values less than 0.05 and at 95% confidence interval.

RESULTS

A total of 140 eligible mothers were interviewed of which maximum 84.2% were in age group 18-24 years. The higher proportions of mothers, (72.8%) were housewives, 90% literate, 75.7% from joint family structure and 33.5% were from socio-economic class-III (Modified BG Prasad classification March 2017). Maternal obstetric characteristics include institutional delivery in 92.1% mothers, mode of delivery as caesarean in 60% and preterm delivery in 22.8% respectively. Infant information depicts, low birth weight in 25.7%, initiation of breast feeding more than two hours in 67.8%. A total of 62.8% were in age 6-9 months with apparent gender difference (Table 1).

Table 1: Maternal and infant characteristics (n=140).

Maternal variables	No	%	Maternal variables	No	%
Maternal age (years)			**Family type**		
18-24	118	84.28	Nuclear Family	34	24.28
24-35	22	5.71	Joint Family	106	75.71
Working status			**Mode of delivery**		
Housewife	102	72.85	Normal	84	60.00
Working	38	27.14	Caesarean	56	40.00
Education			**Time of delivery**		
Illiterate	13	9.28	Preterm	32	22.85
Up to High School	81	57.85	Term	108	77.14
Graduate	46	32.85			
Socio-economic class			**Site of delivery**		
Class I	22	15.71	Home	11	7.85
Class II	32	22.85	Institutional	129	92.14
Class III	47	33.57			
Class IV	25	17.85			
Class V	14	10.00			

Continued.

Infant variables	No	%	Infant variables	No	%
Age (months)			**Birth weight (kg)**		
6-9	88	62.85	≤ 2.5	36	25.71
9-12	52	37.14	>2.5	104	74.28
Sex			**Onset of breast feeding**		
Male	68	48.57	<2 hours	45	32.14
Female	72	51.42	>2 hours	95	67.85

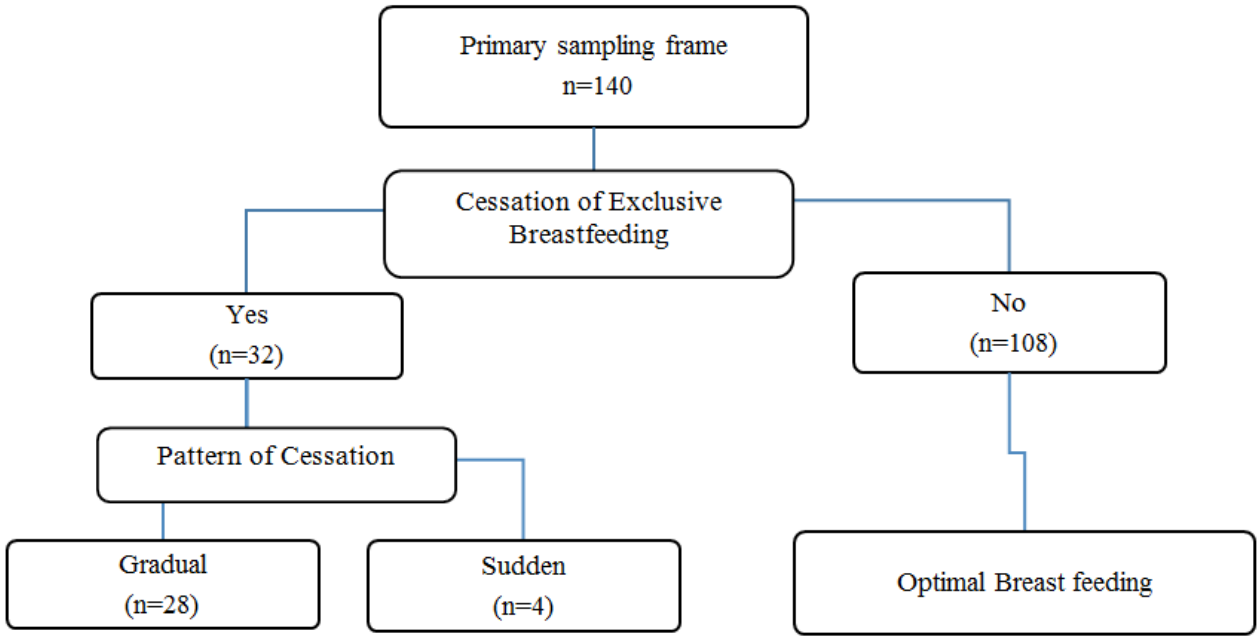

Figure 1: Prevalence of cessation of exclusive breast feeding (EBF).

Table 2: Determinants of cessation of exclusive breast feeding.

Maternal determinants	No	%	Maternal determinants	No	%
Lactation factors			**Psychosocial factors**		
Troubled sucking/latching	2	6.25	Breast feeding too tiring	Nil	Nil
Sore or cracked nipples	Nil	Nil	Long working hours	2	6.25
Breast engorgement	Nil	Nil	Didn't want to breast feed in public	Nil	Nil
Breast abscess	2	6.25	Too many household duties	1	3.12
Nutritional factors			**Medical factors**		
Not enough milk produced	12	37.50	Mother sick	4	12.50
Baby not satisfied	2	6.25	Medication (AKT/ART/OC pills)	Nil	Nil
Baby not gaining weight	Nil	Nil			
Lifestyle factors			**Infant determinants**		
Did not like breast feeding	2	6.25	Sickness baby	4	12.50
Wanted to maintain weight	Nil	Nil	Congenital Anomalies	1	3.12

According to Figure 1, the overall prevalence of cessation of EBF was 22.85%, of which with gradual and sudden cessation was 20% and 2.85% respectively.

The maternal lactation factors like troubled sucking and breast abscess contributed, 6.25% each for cessation of EBF. A total of 37.5% mothers reported lack of sufficient milk production whereas, un-satisfaction by baby in 6.25%. The long duty hours (6.25%), excess household work (3.12%), maternal sickness (12.5%) and dislike for breastfeeding (6.25%) affected EBF. Infant factors like illness and congenital anomalies contributed, 12.5% and 3.12% respectively for cessation of breastfeeding (Table 2).

Table 3: Bi-variate analysis of determinants of cessation of exclusive breastfeeding.

Maternal variable	Cessation of exclusive breastfeeding		Odd's	CI	P value
	Yes (%) n=32	**No** (%) n=108			
Maternal age					
18-24 yrs	23 (19.49)	95 (80.50)	0.34	0.13-0.91	0.05
24-35 yrs	9 (40.90)	13 (59.09)			
Working status					
Housewife	27 (26.47)	75 (73.72)	2.37	0.84-6.71	0.14
Working	5 (15.15)	33 (86.84)			
Education					
Illiterate	2 (15.38)	11 (84.61)	0.58	0.12-2.80	0.72
Literate	30 (14.81)	97 (85.18)			
S-economic class					
Upper class	12 (22.22)	42 (77.77)	0.94	0.41-2.12	0.88
Lower class	20 (23.25)	66 (76.74)			
Family type					
Nuclear family	8 (57.14)	6 (42.85)	4.55	1.43-14.42	0.01*
Joint family	24 (22.64)	82 (77.35)			
Mode of delivery					
Normal	13 (15.47)	71 (84.52)	0.35	0.15-0.80	0.01*
Caesarean	19 (33.92)	37 (66.07)			
Time of birth					
Preterm	8 (25.00)	24 (75.00)	1.16	0.46-2.92	0.92
Term	24 (22.22)	84 (77.78)			
Site of delivery					
Home	4 (36.36)	7 (63.63)	2.02	0.55-7.40	0.47
Institutional	28 (21.70)	99 (76.74)			
Infant factors					
Sex:					
Male	13 (19.11)	55 (80.88)	0.65	0.29-1.46	0.41
Female	19 (26.38)	53 (73.61)			
Birth weight (kg)					
≤2.5	13 (36.11)	23 (73.88)	2.5	1.08-5.87	0.04*
>2.5	19 (18.26)	85 (81.73)			
Onset of breast feeding					
< 2 hours	12 (26.66)	33 (73.33)	1.36	0.59-3.11	0.60
>2 hours	20 (21.05)	75 (78.94)			

*significant p value at 95% confidence interval

The Table 3 depicts, proportions of maternal factors like nuclear family structure and caesarean as mode of delivery have had significantly high rate of cessation of EBF ($p<0.05$). Infant determinant, low birth weight was significantly contributed for cessation of EBF ($p<0.05$). The risk of cessation of EBF was 4.5 and 2.5 times higher reported with maternal nuclear family structure and infant with low birth weight as indicated by Odd's ratio and confidence interval. The characteristics like maternal age, family income, working status of mother and obstetric history (time and site of delivery) did not contribute for cessation of EBF. Similarly, initiation of breast feeding and gender of infant were also not related with cessation of EBF.

DISCUSSION

Breast milk is the ideal food for newborns and infants. It is safe and enriched with antibodies that helps and protects infants from common childhood illness such as diarrhoea and pneumonia, the two primary causes of child mortality. The present study revealed prevalence of cessation of EBF among rural primi-para Indian mother was of 22.8%. This is the first study addressed prevalence of cessation of EBF among primi-para mothers residing in rural area, India and literature search pertaining to the problem statement was not yet addressed in Indian scenario. However; national and international data on prevalence of cessation of EBF reported among mothers was 38% in India, 49.4% in Australia, 56.4% in Iran and

82.1% in Mauritius respectively.[8-11] The chance in norms of society, reduced family size, women literacy and empowerment, available, affordable, accessible and quality maternal and child health care services in study area could be responsible for big difference in prevalence of cessation of EBF. Breast feeding as a traditional Indian culture rooted among the mothers residing in rural area cumulatively too affect breast feeding.

Study revealed maximum, 37.5% mothers complained of not sufficient production of breast milk which lead to cessation of EBF followed by maternal sickness, 12.5% and inverted, cracked or sore nipples, breast abscess and working hours, 6.2% each respectively. The maternal insufficient milk secretion was also identified by two studies conducted in Karachi, Pakistan, 57% and 71% respectively.[12,13] Similar finding has been also reported in a study conducted in Australia however, differences in results could be due to infant breast feeding practices inculcated among mothers by peripheral health workers during post natal care.[14] The local government is also strongly supportive for better maternal and child health care in defined geographical area with maximum emphasis on maternal nutrition and mortality.[15] The present study observed that infant illness contributed, 12.5% for cessation EBF. Similar findings have been also reported by study conducted in Karachi and Middle East.[12,16] The rural habitations, poor environmental conditions, connectivity, low socio-economic status, traditional practices and delay in health seeking behaviour could be resulted in infant sickness which sometimes leads to cessation of EBF.

Mode of delivery as caesarean was a significant factor among obstetrical determinant studied ($p<0.05$). The studies conducted in Eastern Lancashire, Saudi Arabia and North Ethiopia have been also reported the similar findings.[17-19] The surgical intervention, maternal sickness and medicament may change maternal behaviour of breast feeding. The traditional belief and practices, false myths also could have had crucial role on cessation of EBF.

The study documented that nuclear family structure have had significant impact on cessation of EBF and such information was not yet addressed by anybody. In nuclear family structure, the factors like poor emotional support, lack of breast feeding support, excess housework, family conflict and adjustment could be resulted in cessation of EBF. The baby born with low birth weight was significantly associated with cessation of breast feeding with risk of 2.5 times higher than with normal birth weight baby. A similar finding has also been identified in a study conducted in Malaysia among low birth weight baby.[20]

In rural Indian society, people have a strong beliefs and religious practices which might have a strong influence on their behaviour and social habits. The possible reason for less than average value for cessation of exclusive breast feeding in our study area could be that breastfeeding is traditionally a common practice in Indian society, where most of the mothers are housewives and residing in rural areas. Therefore, they have time to breastfeed their infants. Furthermore, women in the study area are highly aware of breastfeeding benefits, due to counselling during antenatal visits and after delivery.[21] Besides, support and encouragement can play an important role in breastfeeding duration.[22] Almost all of our study based mothers delivered at the institution and were encouraged to breastfeed by health workers or family members, which contributed to the reported high rate of breastfeeding in the study area.

CONCLUSION

The prevalence of cessation of EBF was reported low as compared to national average (NHFS-4) among primi-para mothers residing in rural area of western Maharashtra, India. The nuclear family structure, low birth weight baby have had significant effect on cessation of EBF. To achieve optimal EBF need comprehensive breastfeeding strategy with intensive IEC activities during pre and post natal period.

Limitations

This is a hospital based cross-sectional study, so results can't be generalized. Low sample size of the study.

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REFERENCES

1. Global Strategy for infant and young child feeding. World Health Organisation; 2003: 1-37.
2. Victoria CG, Smith PG, Vaughan JP, Nobre LC, Lombardi C, Teixeira AM, et al. Evidence for protection by breastfeeding against infant deaths from infectious disease in Brazil. Lancet. 1987;8(2):319-22.
3. Ahluwalia IB, Morrow B, Hsia J. Why do women stop breastfeeding? Findings from the pregnancy risk assessment and monitoring system. Pediatrics. 2005;116(6):1408-12.
4. Lamberti LM, Walker C, Fischer L, Noiman A, Victora C, Black RE. Breastfeeding and the risk for

diarrhea morbidity and mortality. BMC Public Health. 2011;4:11.
5. Kirkland VL, Fein SB. Characterizing reasons for breastfeeding cessation throughout the first year postpartum using the construct of thriving. Pediatrics 2008;122:569-76.
6. Indian Express. Improvement in breastfeeding rates across the country: Government. Press news published on 2017 Aug. 3rd at 3.49 pm.
7. Taveras EM, Capra AM, Braveman PA, Jensvold NG, Escobar GJ, Lieu TA. Clinician support and psychosocial risk factors associated with breastfeeding discontinuation. Pediatrics. 2003;112(1 Pt 1):108-15.
8. Raja RK. Breastfeeding practice at its low in India. Governance Today 2016. http.//governancetoday.co.in/breastfeeding-practice-low-india/. Accessed on 2 June 2018.
9. Ayton J, Mei I, Wills K, Hansen E, Nelson M. Cumulative risks and cessation of exclusive breast feeding: Australian cross-sectional survey. Arch Disease Childhood. 2015;6:307-13.
10. Vafaee A, Khabazkhoob M, Moradi A, Najafpoor AA. Prevalence of Exclusive Breastfeeding During the First Six Months of Life and its Determinant Factors on the Referring Children to the Health Centers in Mashhad, Northeast of Iran. J Applied Sci. 2010;10:343-8.
11. Avery A, Zimmermann K, Underwood PW, Magnus JH. Confident commitment is a key factor for sustained breastfeeding. Birth. 2009;36:141–8.
12. Hanif S, Murtaza G, Memon MH. Factors Associated with Cessation of Breast Feeding. J Dow University of Health Sci Karachi. 2011;5(1):21-5
13. Ibrahim S, Ansari SN. Factors associated with failure of exclusive breastfeeding. J Surg Pak. 2006;11:24-6.
14. Davies PS. Growth charts for use in Australia. J Paediatr Child Health. 2007;43:4-5.
15. Mohite RV,Mohite VR. Knowledge of breastfeeding among primi-gravida mothers. Bangladesh J Med Sci. 2012;11(3):312-6.
16. Shiva F, Padyabm M. Risk factors in early termination of breast feeding in first time mothers. Middle East J Fam Med. 2008;6:1-5.
17. Agboado G, Michel E, Jackson E, Verma A. Factors associated with breast-feeding cessation in nursing mothers in a peer support programme in Eastern Lancashire. BMC Pediatr 2010;10(3).
18. Shawky S, Abalkhail BA. Maternal factors associated with the duration of breast-feeding in Jeddah, Saudi Arabia. Paediatr Perinat Epidemiol. 2003;17:91–6.
19. Tebikew Y, Tefera B, Muluneh H. Determinants of cessation of exclusive breastfeeding in Ankesha Guagusa Woreda, Awi Zone, Northwest Ethiopia: a cross-sectional study. BMC Pregnancy Childbirth. 2014;14:262.
20. Tan KL. Factors Associated with Non-exclusive Breastfeeding among 4-Week Post-partum Mothers in Klang District, Peninsular Malaysia. Mal J Nutr. 2009;15(1):11-8.
21. Ambike D, Ambike A, Raje S, Chincholikar S. Knowledge, awareness and breastfeeding practices of postnatal mothers in a rural teaching hospital: a cross sectional survey. Int J Reprod Contracept Obstet Gynecol. 2017;6:5429-34.
22. Mitchell BK, Braun KL, Hurwitz EL, Hayes DK: Breastfeeding attitudes: association between maternal and male partner attitudes and breastfeeding intent. Breastfeed Med. 2013;8(4):368-73.

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