

Evaluation of Factors Responsible for Failure of Exclusive Breast Feeding for First 6 Months-Hospital based Study

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ABSTRACT

Introduction: Exclusive breast feeding (EBF) is an essential part of early infant feeding. Promotion of EBF is the single most cost-effective intervention to reduce infant mortality in developing countries. However in India, a large number of infants are not exclusively breast fed as per infant feeding recommendations. Understanding the factors influencing EBF is crucial to promote this essential feeding policy in infancy. This study was carried out to identify factors affecting EBF among mothers attending Government General Hospital of a Tertiary care centre.

Material and Methods: Hospital-based cross-sectional study was conducted from Jan 2012 to Sept 2013 involving a total of 2000 parents with the help of a proforma containing predesigned questionnaire. Demographic data of parents, obstetric details of mother, birth weight of baby, details on antenatal advice about breast feeding practices, other details like prelacteals, duration of exclusive breast feeding, awareness on bottle feeding and reasons for non exclusive breast feeding were noted. The data collected was tabulated and statistically analysed.

Results: Out of 2000 children taken up for study, 1133 (56.65%) were exclusively breast fed. The prevalence of predominant and partial breast feeding was 11% (220/2000) and 29.8% (596/2000) respectively. 51 children were not breast fed. Factors promoting EBF with statistical significance were parity of the mother, antenatal advice, mode of delivery, birth weight, breast feeding initiation time and prelacteals.

Conclusions: EBF rates were higher in multiparous women, mothers aged >20 yr, babies in whom prelacteals were not given and breast feeding was initiated within 1 hour of life.

Keywords: exclusive breast feeding, prevalence, prelacteals, misconceptions

INTRODUCTION

EBF for 1st 6 months is the most appropriate infant feeding practice and its benefits are well established.¹ WHO recommends exclusive breast feeding for 1st 6 months of life and continued breast feeding upto 2 yr of age or beyond. This is the most cost effective intervention to reduce infant mortality in developing countries. With optimal breast feeding practices, children are less prone to diseases such as diarrhea, pneumonia and otitis media in addition to significant benefit on brain development and long term protection against childhood obesity, diabetes and cardiovascular diseases.² Realising the high prevalence of inappropriate child feeding practices and the importance of exclusive breast feeding, the Govt of India included specific goals in the 10th five year plan to improve infant feeding practices in order to reduce infant mortality rate (IMR) and malnutrition and promote integrated early child development. Its aim is to increase the initiation of breast feeding within 1 hr of birth to 50% from the current level of 15.8% and to increase the exclusive breast feeding rate in the 1st 6months to 80% from the current level of around 46%.²

Though there have been global movements towards protecting, promoting and supporting breast milk as a part of optimal feeding practice among newborn babies, there exists many discrepancies between what has been recommended and what is being practiced in reality.³ There are number of factors like undesirable socio-cultural beliefs, poor knowledge of exclusive breast feeding and many other variables which are intrinsically related to breast feeding practices of the mother.⁴ This fact justifies the need for a regional study that could suggest necessary interventional steps based on knowledge of local realities. The present study was undertaken with this objective to know prevalence of EBF and to study various factors responsible for failure of EBF for the first 6 months and to study average duration of EBF in this region.

MATERIAL AND METHODS

This study was a cross sectional hospital based study conducted in the Department of Pediatrics in Govt. General Hospital, Rangaraya Medical College, Kakinada from Jan 2012 to Sept 2013. Sample size was 2000. Parents attending with their children in the age group of 1-2 year were interviewed in the local language with the help of a proforma containing predesigned questionnaire. Written informed consent was taken from all the parents who participated in the study and institutional ethics committee approval was obtained before undertaking the study. Data regarding demography, educational status of mother and father, parity, mode of delivery and birth weight were recorded. Details of antenatal advice on breast feeding, breast feeding initiation time, prelacteals, duration of EBF, awareness on bottle feeding and reasons for non exclusive breast feeding were noted.

STATISTICAL ANALYSIS

Data was presented as mean and standard deviation (SD) using IBM SPSS version 20. To compare the significance of association between breast feeding practices and the variable, Chi-square test was employed and p value <0.05 was considered statistically significant.

RESULTS

In the present study average duration of EBF was 5.07months. Out of 2000 children taken up for study, 1133 (56.65%) were

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exclusively breast fed. There was no statistically significant difference in the prevalence of breast feeding among males and females. The prevalence of predominant and partial breastfeeding was 11% (220/2000) and 29.8% (596/2000) respectively. 51 children were not breast fed (Table-1).

Prevalence of EBF was higher in mothers of ≥ 20 yr of age (57.4%) than in mothers of <20 yr of age which was statistically significant with a p value of <0.05 . The proportion of rural mothers practicing EBF was 57.7% (869) while proportion of urban mothers practicing EBF was 53.3% (264). The association between residence and EBF was found to be statistically insignificant with p value of >0.05 . 57% and 56.7% of Hindu and Christian children were exclusively breast fed whereas only 30% of Muslim children were exclusively breastfed. The association between religion and EBF was statistically insignificant. 59.6% of illiterate mothers and 55.4% of literate mothers exclusively breastfed their children for >6 mo. The association between maternal education and EBF was statistically insignificant with a p value of >0.05 .

Factors promoting EBF which were statistically significant include parity of the mother, antenatal advice, mode of delivery, birth weight, breast feeding initiation time and prelacteals. The various factors assessed for their effect on EBF shown in Table-2.

Reasons for failure of exclusive BF for first 6 months were given in table-3. Maternal misconceptions (308 ie 35.52%), was the commonest reason for non EBF followed by local practitioners advice ((242 ie 27.9 %) and others advice (107 ie 12.34%). Baby factors like feeding difficulties, prematurity etc account for only 8%. Out of 2000 parents, only 34.5% (690) were aware of the risks of bottle feeding.

DISCUSSION

The overall prevalence of EBF in our study was 56.6%. This is closely correlating with the results of Rajesh et al,^{5,6} whereas the prevalence of EBF according to NFHS-3 was 46%.⁷ This shows a relatively better breast feeding practices in our area. In the present study, there is no statistically significant difference between the prevalence of EBF in male and female children (52.33% and 47.60%). Similar results were reported in the study done by Ukegbu et al⁸ (35.7% and 38.9%) whereas EBF was more prevalent among male children in the study done by Rajesh et al. In the present study, EBF is practiced mostly by mothers of ≥ 20 yr of age (57.4%) which was also reported by Ukegbu et al. But in the study by Rajesh et al, EBF was more prevalent among mothers of <20 yr of age (87%).

EBF is also found to be more prevalent among illiterate mothers in the present study which correlates with the study by Rajesh

Status	Number	%	Male	%	Female	%	Total
Exclusive BF	1133	6.65%	593	55%	540	58.5%	1133
Predominant BF	220	11%	146	13.5%	74	8.02%	220
Partial BF	596	29.8%	318	29.5%	278	30.1%	596
No BF	51	2.55%	21	1.95%	30	3.25%	51

Table-1: Prevalence of exclusive, partial, predominant and no breast feeding

Factor	EBF	%	Non EBF	%	Total	p value
MATERNAL AGE						
≥ 20 yr	1055	57.4	783	42.6	1838	<0.05
<20 yr	78	48.1	84	51.9	162	
Urban	264	53.3	231	46.7	495	>0.05
Rural	869	57.7	636	42.3	1505	
Hindu	865	57	653	43	1518	>0.05
Muslim	6	30	14	70	20	.
Christian	262	56.7	200	43.5	462	
Literate	780	55.4	628	44.6	1408	>0.05
Illiterate	356	59.6	241	40.4	597	
Primigravida	219	49.8	221	50.2	440	<0.01
Multigravida	917	58.8	643	41.2	1560	
Antenatal advice						
Given	976	59	677	41	1653	
Not given	162	46.7	185	53.3	347	<0.01
Normal delivery	952	59	662	41	1614	
LSCS	185	48	201	52	386	<0.01
Weight of baby						
Normal	823	55.2	667	44.8	1490	<0.05
LBW	314	61.6	196	38.4	510	
BF initiation time						
<1 hr	505	63.1	295	36.9	800	
1-6 hr	372	60	249	40	621	<0.01
>6 hr	256	48.5	272	51.5	528	
Prelacteals Given	287	47	323	53	610	<0.01
Not given	844	63	495	57	1339	

Table-2: Various factors affecting EBF rate

Factors	Number	Percent (%)
Feeding difficulties	50	5.77
Prematurity	12	1.39
Surgery	19	2.2
Misconceptions	308	35.52
Maternal illness	54	9.7
Maternal stress	16	1.85
Maternal psychosis	2	0.23
Breast problems	17	1.96
Working mother	2	0.23
Local practitioner advice	242	27.9
Advice by others	107	12.34
Adoption	7	0.80
Temp separation from mother	4	0.46
Not known	7	0.80

Table-3: Reasons for Non EBF for first 6 months

et al. The proportion of multiparous women practicing EBF is greater than in primiparous women which correlates with the study by Ukegbu et al. This could be due to better awareness and confidence to breast feed in multiparous women. In the present study, mothers who received antenatal advice practiced EBF more commonly which is also shown in the study by Rajesh et al. In the present study, more number of babies delivered by normal vaginal delivery were exclusively breast fed which was also reported by Rajesh et al. This is probably due to delay in initiation of breast feeding following caesarean section. EBF is more prevalent in LBW babies, probably due to continuous monitoring and emphasis on breast feeding of LBW babies by health care personnel. In the present study, EBF is more prevalent in babies who were initiated feed within 1 hr of birth (63.1%) than in babies in whom breast feeding initiation was delayed. This correlates with the study by Rajesh et al.

The main reasons for failure of EBF in our study misconceptions (35.52%) which is similar to the study done by Nayak et al⁹ followed by other factors like lack of knowledge that EBF should be continued for first 6 mo, improper advice (27.9%) by local practitioners and other family members (12.34%). Majority of the mothers (65%) were not aware of the risks of bottle feeding. The average duration of EBF in this study was 5.07 months. Most of the mothers were under the impression that breast feeding alone is not sufficient after 4 mo and complementary feeds should be introduced at 4-6 mo age for proper growth of the infant.

The prevalence of EBF in the present study is higher than the national level indicating better feeding practices in our area. However there is a scope for improvement in EBF rate as a large proportion of infants are not exclusively breastfed during the first 6 months despite what is recommended in the national and global infant and young child feeding (IYCF) guidelines probably due to failure of mass education programmes on nutrition guidelines to reach people residing in all parts of the country with a special focus on lactating mothers. Hence, ongoing multi-sectoral approach at national level with periodic reinforcement in certain areas is required to bring about social and behavioural changes regarding optimal infant feeding practices at health centres and community level in order to reach the goal of EBF as the most appropriate infant feeding practice. Some of the measures to promote EBF by breast feeding

propagation programmes is to identify, counsel and provide extra support to at risk mothers who are found to be more likely to discontinue EBF early like primiparous and caesarean section mothers. Education programmes on breast feeding should be taken up in all antenatal, postnatal and immunisation clinics. Contraindications for BF are very and all health care personnel should be well versed with the contraindications to BF and advise mothers to continue BF even while on medications for diseases like tuberculosis or suffering from minor illness like fever. Awareness regarding correct breast feeding practices like EBF for first 6 mo, early initiation of breast feeding within 1 hr after birth, avoidance of prelacteals and knowledge about adequacy of breast milk to lactating mothers, has to be reinforced during each visit to health centre or during the house visit by health workers. Lactation failure is a major problem in mothers when baby is sick or LBW and admitted for prolonged period in NICU. Majority of these babies tend to be on formula feeds after discharge from health facility. Special effort to sustain lactation by counselling these mothers to initiate frequent expression of breast milk soon after admitting the baby prevents lactation failure thereby improving the EBF rate among these babies once they recover and able to take direct breast feeding. Mass media communications like radio, TV and posters can be used to increase awareness regarding EBF and to remove misconceptions in the general public.

Limitations: As this is a hospital based study, it does not represent the true situation in the community. Most of the children included in the study were sick and often come from poor socio economic status. Since study group was children between 1-2 yr, there could be a chance of recall bias by parents as they had to recall from their memory and answer the questions.

CONCLUSION

In spite of the well-recognized importance of EBF, the practice is not widespread in the developing world. EBF rates in our study were higher in multiparous women, mothers aged >20 yr, babies in whom prelacteals were not given and breast feeding initiation done within 1 hr of life. Though the prevalence of EBF in the present study is higher than the national level indicating better feeding practices in our area, it is far behind the national target of 80% set by Govt of India implying the fact that promotion of IYCF programmes nationwide continue to require investments and commitment in order to have maximum impact on children's lives.

REFERENCES

1. World Health Organization. Infant and young child nutrition: global strategy on infant and young child feeding. Geneva. 2002; (Fifty fifth World Health Assembly, A55/15). http://webitpreview.who.int/entity/nutrition/publications/gs_infant_feeding_text_eng.pdf
2. National guidelines on infant and young child feeding. Ministry of Human Resource Development. Department of Women and Child development (Food and Nutrition Board). Government of India. 2004; p. 2-3. <http://wcd.nic.in/nationalguidelines.pdf>;
3. Edmond K, Bahl R. Optimal feeding of low-birth-weight infants. Technical Review. Bull World Health Organ. 2006;30:1-3.
4. Dungy CI, Losch M, Russell D. Maternal attitudes as predictors of infant feeding decisions. Journal of the

- Association for Academic Minority Physicians. 1994;5: 159-164.
5. Rajesh K Chudasama, Amin CD, Parikh YN. Prevalence of Exclusive Breast feeding and its Determinants in first 6 months of life. *Online J Health Allied Scs.* 2009;8:3.
 6. Rajesh K Chudasama, Panna C Patel, Abhay B Kavishwar. Determinants of Exclusive Breast feeding in South Gujarat region of India. *J.Clin Med Res.* 2009;1:102-108.
 7. National family Health Survey (NFHS-3), 2005-06. International Institute for Population Sciences, Deonar, Mumbai.
 8. AU Ukegbu, PO Ukegbu, UU Onyeonoro, CF Ubajaka. Determinants of breast feeding patterns among nursing mothers in Anambra State, Nigeria. *South African Journal of Child Health.* 2011;5:112.
 9. Nayak Sunil, Jay Padodara, Patel Sushil, Gharat Vaibhav, Patel Swati et al. Breast feeding practices in urban community of Surat city. *National journal of Community Medicine.* 2010;1:111-113.

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