

Original Research Article

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Evaluation of factors responsible for lactation failure-hospital based study

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ABSTRACT

Background: Exclusive breastfeeding is an essential part of early infant feeding. Promotion of EBF is the most effective way to reduce the infant mortality rate. This study was carried out to identify factors affecting EBF among mothers attending Narayana medical college hospital Nellore. Aim and objectives of the study was to know the incidence of lactation failure and to evaluate the factors responsible for lactation failure.

Methods: Hospital-based cross-sectional study conducted from July 2018 to September 2018 involving a total of 100 mothers with the help of a proforma containing predesigned questionnaire. Demographic data of mother, obstetric details, mode of delivery, birth weight, details of antenatal advice about breastfeeding and practices, pre-lacteal feeds, current feeding practice, problems encountered during breastfeeding, anatomical problems were noted. The data collected were tabulated and statistically analyzed.

Results: At the end of the study, among 100 mothers, 24 mothers are reported to have lactation failure and feeding babies with formula feeds. Among the variables taken into consideration pre-lacteal feeds, problems encountered during breastfeeding, breast diseases showed a statistically significant association with lactation failure. Mean weight gain in breastfeeding mothers and mothers with lactation failure is 11.3 kgs and 10.04 kgs respectively. Mean hemoglobin in breastfeeding mothers and mothers with lactation failure is 10.43 g/dl and 9.91 g/dl respectively.

Conclusions: The results provide information about the relation between breastfeeding failure and its association with factors that contribute to it.

Keywords: Exclusive breastfeeding, Lactation failure, Pre-lacteal feeds

INTRODUCTION

EBF for 1st six months is the most appropriate infant feeding practice, and its benefits are well established. WHO recommends exclusive breastfeeding for 1st six months of life and continued breastfeeding up to 2 years of age.^{1,2}

In spite of breastfeeding being the most natural act with numerous benefits, the incidence of failure is high.² With optimal breastfeeding 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.³

It is important to identify factors that may interfere with the initiation and continuation of breastfeeding. Aim and objectives of the study was, to know the incidence of lactation failure and to assess the factors responsible for Lactation failure.

METHODS

This is a hospital-based observational study conducted in the department of pediatrics in Narayana medical college from July 2018 to September 2018. The sample size was 100. Duration of study was 2 months.

Inclusion criteria

- The study included the mothers who delivered babies at term with appropriate weight for gestational age attending op in the tertiary care center.

Exclusion criteria

- Mothers with preterm delivery.
- Mothers whose babies are in NICU admission for any medical illnesses.
- Mothers in whom breastfeeding is contraindicated.

Parents were interviewed in their own language with the help of proforma containing a predesigned questionnaire (Annexure 1). Data regarding demographic data of mother, obstetric details, mode of delivery, birth weight, details of antenatal advice about breastfeeding and practices, pre-lacteal feeds, current feeding practice, problems encountered during breastfeeding, anatomical problems were recorded.

Statistical analysis

Data was presented in tabular form. To compare the significance of the association between breastfeeding practice and variables Chi-square test was employed. p-value <0.05 was considered statistically significant.

RESULTS

Out of 100 children taken up for the study, 76 are exclusively breastfed. Twenty-four are being fed through formula feeds.

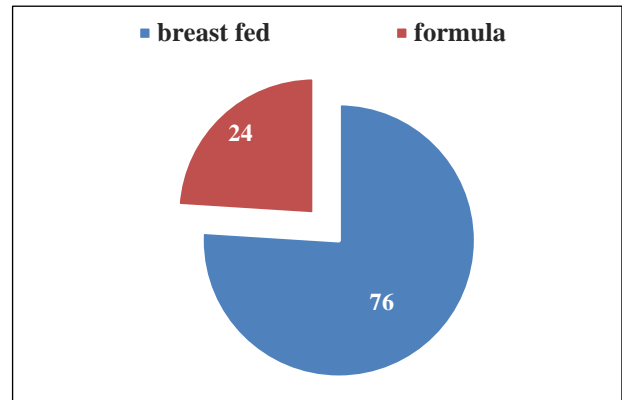


Figure 1: Distribution of breast feeding and lactation failure.

Table 1: factors having no significant association with lactation failure.

Variable		Breast feeding	Lactation failure	p value
Literacy	Literate	3	3	0.12
	Illiterate	73	21	
Working	Yes	63	20	0.96
	No	13	4	
Over crowding	Yes	33	7	0.21
	No	43	17	
Order of pregnancy	Primi	47	16	0.67
	Multi	29	8	
Brest fed previously	Yes	26	6	0.39
	No	50	18	

Table: 2 Effect of pre-lacteal feeds.

Pre-lacteal feeds	Breastfeeding	Lactation failure
Yes	20	21
No	56	3

Most of the lactation failure cases were found in mothers who are educated above high school level (71 %) than the mothers who are educated below high school level

(29%), but it is not statistically significant (p>0.05). Among the data collected, 14 % of mothers are working, and 86% are not working, but there is no statistically significant difference in prevalence between the two groups (p=0.96). Highest cases of lactation failure were noted among Hindus (75%) but not statistically significant when compared to other religions; this is because of more sample size of Hindus (83) than other religions. In the data collected 30 babies were delivered through NVD, rest through LSCS. But there is no

statistically significant difference in the prevalence of lactation failure among these two groups.

There was no statistically significant difference in the prevalence of lactation failure in relation to literacy, overcrowding, poverty, religion, caste, the order of pregnancy, mode of delivery, antenatal illness. Among the variables taken into consideration pre-lacteal feeds, problems encountered during breastfeeding, breast diseases showed a statistically significant association with lactation failure ($p < 0.05$). Tables 2,3,4 showing the factors which have a statistically significant association with lactation failure.

Table: 3 Effect of problems during breastfeeding

Problems during bf	Breastfeeding	Lactation failure
Yes	0	2
No	76	22

Table: 4 Effect of diseases of breast

Diseases of breast	Breastfeeding	Lactation failure
Cracked nipple	0	1
Retracted nipple	0	1
No disease	76	22

DISCUSSION

Breast feeding is the best method of infant feeding because human milk continues to be only milk tailor made and uniquely suited to the human infant.³ WHO/UNICEF have emphasized the first 1000 days of life, i.e., the 270 days in-utero and the first two years after birth as the critical window period for nutritional interventions.⁴ WHO and UNICEF - use of human milk from other sources should be the first alternative for the mother breastfeed as it reduces the chances of infection.⁵

Globally, lactation insufficiency is a public health concern, as the use of breast milk substitutes increases the risk of morbidity and mortality among infants in developing countries, and these supplements are the most common cause of malnutrition.⁶ As the maximal brain growth occurs, malnutrition in this critical period can lead to stunting and suboptimal developmental outcome.⁷

The overall prevalence of lactation failure in this study is 26%. EBF is found to be more prevalent among illiterate mothers in the present study. There are also many factors affecting a pregnant woman's decision to choose to breastfeed (social conditions, her or others' personal experiences, economic and family considerations, religious or ethnic beliefs). At times mothers are uninformed about the benefits and advantages of breastfeeding, while others are unprepared for the initial difficulties that they may face.

The association between maternal education and EBF was statistically insignificant in this study with a p -value > 0.05 as in the study by N. Madhavi IJCMR, 2016.⁸ Association of lactation failure with religion is statistically insignificant as in the study by N Madhavi IJCMR, 2016. This finding demonstrate that c-sections are not associated with reduced breastfeeding success in the when compared to vaginal births which are against the results of the study conducted by Hobbs et al. in 2016 , study by N. Madhavi IJCMR June 2016, Vincenzo zonardo study 2013 and a study conducted in pune in 2016.⁸⁻¹¹

This study demonstrated a statistically significant association between lactation failure and pre-lacteal feeds, problems encountered during breastfeeding (difficulty in positioning, letdown reflex, latching, sucking) and diseases of the breast (sore nipple, breast abscess, retracted nipple).

CONCLUSION

In spite of the well-recognized importance of EBF, there are many cases of lactation failure that are reported. In this study, there are high lactation failure rates in children who were given pre-lacteal feeds which is to be avoided. Additional supportive care made available to lactating women immediate to early postpartum period will decrease the lactation failure rates due to problems in positioning, latching and various diseases of the breast. Antenatal counselling of mother is essential to decrease the rates of lactation failure as it increases the preparedness of the mother to give breastfeeding.

It is clear that artificial formula will never provide the broad range of benefits of human milk. Given the high rate of preterm births in INDIA and level of malnutrition that ensues in the postnatal growth in such babies after birth, there is an urgent need to establish milk banks across the country.³

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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ANNEXURE - 1

Proforma of Questionnaire:

1. Name:
2. Registration no:
3. Literacy:
4. Working/ housewife:
5. Poverty:
6. Overcrowding:
7. Phone number:
8. Antenatal details:
 - Age
 - Order of pregnancy
 - Breast fed previously (if > para 1):
 - Interpregnancy interval
 - Pih/gdm/hypothyroidism/psychiatric illness/tuberculosis/allergy/anaemia/asthma/fever prior or after delivery
 - Others
9. Mode of delivery (nvd/ lscs/ others):
10. Pre-lactal feeds:
 - Formula feed/ glucose water/cows milk/honey/warm water
11. Priming for breast feeding:
 - Mphw/ Family Member/ Obstetrician/Paediatrician
12. Factors related to baby:
 - Birth weight
 - Term/ preterm
 - Sga/ aga/ lga
13. Factors related to breastfeeding technique:
 - Let down reflex/positioning/latching/burping
14. Nipple related: Sore nipple/retractile nipple/cracked nipple/mastitis.