

Original Research Article

Maternal factors influencing exclusive breastfeeding of babies at six weeks of age

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ABSTRACT

Background: Exclusive breastfeeding for first six months of life has several advantages for babies as well as mothers. However exclusive breastfeeding may not be followed by mothers due to various reasons. The objective of this study was to study the rates of exclusive breastfeeding and mixed feeding in infants at Six weeks of age.

Methods: Prospective observational study. 200 mothers and their healthy full term newborns were included. Exclusive and early breastfeeding was initiated with guidance and support for the mothers during their hospital stay. All mothers were given verbal advice about the need and benefits of exclusive breastfeeding for first six months. Primary outcome: number of mothers giving exclusive breastfeeding or mixed feeding at six weeks postnatal age during the first immunisation visit.

Results: 92.78% mothers were exclusively breastfeeding their babies at 6 weeks of age. 7.22% had started mixed feeding. 96.23% of multipara and 87.84% of primipara were respectively giving exclusive breastfeeding at 6 weeks. The difference was statistically significant (P value 0.0328). Mothers aged 20-35 years (95.65%) were more likely to continue exclusive breastfeeding than those aged <20 years (87.33%), P value 0.0071. Mothers with education of pre-university course and more (92%) were less likely to give exclusive breastfeeding than those with secondary school education and less (98.33%); P value 0.0397.

Conclusions: Young mothers <20 years, primipara, those with higher education were more likely to deviate from exclusive breastfeeding at six weeks postnatal age. These mothers need additional counseling and support to continue exclusive breastfeeding for six months.

Keywords: Counseling, Infants, Lactation, Mixed feeding

INTRODUCTION

Exclusive breastfeeding helps to achieve optimal growth, health and development of infants. In 2002, WHO as a global public health recommendation said that infants should be exclusively breast fed for first six months of life. Early establishment of breastfeeding helps to secure lactation for long term.¹⁻³ Early initiation of breastfeeding within the first hour of life with exclusive breastfeeding for first six months has been recommended as the most appropriate feeding strategy by the infant and young child

feeding (IYCF) chapter of IAP in 2016.⁴ The rates of exclusive breastfeeding in India have been sub optimal in the last decade. Overall 46.3% and 48.6% of infants <6 months were exclusively breastfed respectively according to National Family Health Survey 1 and 3 (NFHS-1 and 3).⁵ Health services play a crucial role in promotion of breastfeeding. Baby friendly hospital initiative (BFHI) is conducive to promotion and facilitation of establishment of exclusive breastfeeding by mothers.⁶ Many studies have underlined the importance of lactational counseling for continuation of effective long term lactation.⁷⁻⁹

Timely intervention to support and encourage exclusive breastfeeding should be done.

This study was carried out to assess the rates of exclusive breastfeeding and mixed feeding at 6 weeks postnatal age and the factors that are associated with initiation of mixed feeding. Early identification of mothers who are more likely to deviate from exclusive breastfeeding will help to take necessary corrective measures.

METHODS

This prospective observational study was conducted in MVJ Medical College and Research Hospital, Hoskote, Bangalore and BGS Global Institute of Medical Sciences, Bangalore over a period of six months. 200 mothers who delivered healthy, full term, normal singleton neonates were included in the study. Preterm (< 37 completed weeks of gestation), low birth weight babies (< 2500g birth weight), babies with birth asphyxia, congenital anomalies and those needing NICU observation/admission were excluded from the study. Bedding in of babies and early initiation of breastfeeding was started as per BFHI policy. Adequate supervision and support for exclusive breastfeeding was given by nurses and doctors. All the mothers received unstructured verbal advice during postnatal rounds and at time of discharge about the benefits of exclusive breastfeeding for first six months. The mothers and their babies were advised follow up one week after discharge during which the need for exclusive breastfeeding was emphasized and queries regarding breastfeeding were addressed. The

mother baby dyads were called at 6 weeks for the first immunisation visit. 20 mothers did not return for this visit. A semi structured questionnaire was used to gather data from 180 mothers. Rates of exclusive breastfeeding and mixed feeding at 6 weeks of age were assessed as the primary outcome. The impact of maternal age, parity, education and socioeconomic status on adherence to exclusive breastfeeding were the secondary outcomes. For purposes of analysis, lower/ lower middle classes were grouped together as were middle/ upper middle classes.

Statistical analysis

SPSS version 21 was used. Variables were analysed using chi2 test. P values < 0.05 were considered significant.

RESULTS

Out of 180 mothers, 167 (92.78%) were exclusively breastfeeding their babies at 6 weeks of age. 13 (7.22%) mothers had started mixed feeding (breast feeding + top milk/water/sugar water). There were 98 male (54.44%) and 82 (42.56%) female neonates in the study. The characteristics of the exclusively breastfeeding (EBF) and the mixed feeding (MF) groups are given in Table 1.

138 (76.67%) mothers belonged to the age group of 20-35 years. 95.65% of mothers in this group were giving EBF compared to 83.35% of mothers aged <20 years (P value = 0.0071).

Table 1: The characteristics of the exclusively breastfed (EBF) and mixed feeding (MF) groups.

Variables	n (%)	EBF n = 167 (92.78%)	MF n = 13 (7.22%)
Age	<20 years, 42 (23.33%)	35 (83.33%)	7 (16.67%)
	20-35 years, 138 (76.67%)	132 (95.65%)	6 (4.34%)
Primipara	74 (41.11%)	65 (87.84%)	9 (12.16%)
Multipara	106 (58.89%)	102 (96.23%)	4 (3.77%)
SE status	Low 112 (62.22%)	104 (92.86%)	8 (7.14%)
	Middle 68 (37.78%)	63 (92.64%)	5 (7.35%)
Education	Higher sec/less 105 (58.33%)	98 (98.33%)	7 (6.67%)
	PUC /more 75 (41.67%)	69 (92.00%)	6 (8.0%)

106 (58.89%) were multiparous and 74 (41.11%) were primiparous mothers. 96.23% of multipara were exclusively breastfeeding versus 87.84% primipara, P value was significant (0.0328). 105 mothers (58.33%) had secondary education or less while 75 mothers (42.67%) had pre-university or more education. 98.33% of the former group and 92% of the latter group were exclusively breastfeeding respectively (P value = 0.0397). 92.86% of mothers in the lower/lower middle socioeconomic group were exclusively breastfeeding as

were 92.64% of those in middle/upper middle socioeconomic group (P value = 0.9560).

Table 2: Barriers to exclusive breastfeeding.

Problems	n (%)
Mother's perception of insufficient breast milk	9 (69.23%)
Cracked nipple	2 (15.38%)
Congested breast	1 (7.69%)
Neonatal illness	1 (7.69%)

The various problems encountered by mothers who started feeds other than breastfeeding (7.22%) were analyzed. Table 2 enlists the problems or barriers to exclusive breastfeeding. The commonest reason was the mother's perception of insufficient milk supply (69.23%).

DISCUSSION

Exclusive breastfeeding was being practiced at six weeks postnatal age by 92.78% mothers and mixed feeding was done by 7.22% mothers in this study. In a prospective cohort study in six low and middle income countries, Patel A et al reported highest rates of exclusive breast feeding at 42 days postnatal age from Indian sites (Belgium 99.5% and Nagpur 99%). In the other global network participating sites, the rates ranged from 76% to 99.5%.¹⁰ However the rates of EBF at 4-6 months are not satisfactory in India in the last 10-15 years. Chandhiok et al analyzed national survey data and found 46.3% and 48.6% of infants < 6 months were exclusively breastfed respectively in NFHS-1 and NFHS-3. With each additional month, the proportion declined and at 4 months only 31% of infants in NFHS-3 were found to be exclusively breastfed.⁵ Studies in Gujarat and rural Tamilnadu reported prevalence of exclusive breastfeeding at 6 months to be 37% and 34% respectively.^{11,12}

The trend of exclusive breastfeeding is gradually decreasing in India unfortunately especially in urban areas. Nanvathi RN et al stated that though mothers start breastfeeding naturally, they switch over to top feeds at the slightest problem.¹³ In the present study, young mothers < 20 years were more likely to start top feeds than those aged 20-35 years (P value = 0.0071). Majority of multipara women were giving exclusive breastfeeding than primipara mothers and the difference was statistically significant. Nanvathi et al also found that primipara mothers require additional support and assistance.¹³ In the present study, mothers who were better educated were practising exclusive breastfeeding less than those who had received secondary education or less (P value = 0.0397). This shows that attitudes of mothers and not education are important for successfully continuing exclusive breastfeeding. Also, this study did not show any significant difference between mothers of low/lower middle and middle/upper middle socioeconomic status with regard to exclusive breastfeeding at 6 weeks. Suksham J et al, reported that only 75.8% of women were exclusively breastfeeding at the end of 6 weeks. The risk factors in their study for early cessation of EBF were Cesarean section and primiparous mothers.¹⁴

The most common cause for initiating mixed feeding seen in this study was maternal perception of insufficient breast milk in 69.23%, followed by cracked nipples in 15.38%. Nanvathi et al also cited mothers' own assessment of inadequate milk in 73.6% mothers as the commonest reason for starting supplementary feeds and local breast problems accounted for 11.8%. They

demonstrated that psychological support and instilling confidence in mother is a vital form of therapy.¹³ Pereira et al showed that lactational counseling and specific instructions for early initiation of breastfeeding help to change maternal behaviour and better infant weight gains.⁹

Limitations of this study were the small number of participants. The route of delivery and occupation of the mothers which may have a bearing on the practice of exclusive breastfeeding were not considered.

CONCLUSION

Exclusive breastfeeding should be initiated early after delivery. The rates of exclusive breastfeeding are high initially in infants at 6 weeks of age. Mothers aged <20 years, primiparas and those who have higher education are more likely to start mixed feeding. These mothers require additional counseling and support to further continue exclusive breastfeeding for six months.

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