

Brief Report

Study of Infant Feeding Practices: Factors Associated with Faulty Feeding

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Summary

KEM Hospital, Mumbai was recognized as a 'baby-friendly' hospital on the basis of adherence to the 'Ten steps to successful breastfeeding', a decade ago. This study was undertaken to determine the sustainability of the programme in terms of feeding practices undertaken by the mothers on the basis of advice given to them. A total of 92.11 per cent of the infants up to 6 months of age received exclusive breastfeeding. Timely complementary feeding rate was 95 per cent. Thus interventions used in the programme seem sustainable.

Introduction

The Indian Academy of Pediatrics recommends exclusive breastfeeding for the first 4–6 months followed by sequential addition of semi-solid and solid foods to complement (not replace) breastmilk until the child is gradually able to eat the normal family food at around 1 year of age.¹

The 'baby friendly hospital initiative' (BFHI) has been proposed with the aim to promote breastfeeding, with due attention to infant feeding practices. A German study has demonstrated that the feeding practices are variable even in the designated 'baby-friendly hospitals'.² The infant feeding practices followed by women attending the under-fives clinic at the KEM Hospital, Mumbai need to be analysed to see the long-term impact of the programme.

The aims of the study were

- (1) To determine the proportion of
 - (a) babies up to 120 days of age who are exclusively breastfed;
 - (b) infants aged 6–10 months who have been started on complementary foods.
- (2) To evaluate the performance of hospital services (antenatal, post-natal, as well as well-baby clinic services) regarding the encouragement of optimum feeding practices.

Materials and Methods

This prospective study was carried out among infants attending the under-fives clinic of the KEM Hospital,

which caters for babies born in the hospital. The protocol received the consent of the institution's ethics committee. Routinely, every infant–mother couple is advised to attend the clinic at 15 days, 6 weeks, 10 weeks, 14 weeks, and then at monthly intervals until 1 year of age and at 2-monthly intervals thereafter.

Informed consent from the mother was obtained. The mothers were interviewed using a pre-designed pre-tested questionnaire. The 24-h recall period for assessing feeding practices was used because it is widely used and found appropriate in surveys of dietary intake, and reduces recall bias.³ The same investigator conducted all the interviews, to avoid inter-observer error.

Results

Ninety-nine mothers were interviewed during a period of 3 months. One infant, suspected to have galactosemia, was excluded.

Among infants up to 6 months of age, 92.11 per cent were exclusively breastfed while 2.63 per cent were predominantly breastfed.

Only 21.05 per cent of mothers could enumerate two specific advantages of breastfeeding. These included the nutritive value of breastmilk and prevention of infection. Reasons for delayed breastfeeding, among those not breastfed within the first hour of birth after vaginal delivery, included jaundice, neonatal dyspnea, and neonatal resuscitation. The common weaning foods included dal, rice, fruits like chikoo, cow's milk and biscuits. Three mothers had problems with breastfeeding. Two perceived inadequate milk secretion. One mother was worried that her low-birthweight baby may be too weak to suckle. All three approached the

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TABLE 1
Categorization of infant feeding practices

Category	Infants must receive	Allows infant to receive	Does not allow infants to receive
Exclusive breastfeeding	Breastmilk	Drops and syrups (vitamins, minerals and medicines)	Anything else
Predominant breastfeeding	Breastmilk as a major source of energy	Ritual fluids, drops or syrups and liquids (water-based drinks, fruit juice, ORS)	Anything else (non-human milk, food-based drinks)
Complementary feeding	Breastmilk and semisolid or solid food	Any food or liquid including non-human milk	

TABLE 2
Definitions of exclusive breastfeeding rate, predominant breastfeeding rate and timely complementary feeding rate as per formulae given by the WHO^{3,4}

Exclusive breastfeeding rate = Infants up to 4 months exclusively breastfed divided by Total number of infants aged up to 120 days
Predominant breastfeeding rate = Infants up to 4 months who were predominantly breastfed divided by Total number of infants aged up to 120 days
Timely complementary rate = Infants 6-10 months who received complementary feeds in addition to breastmilk in the last 24 h divided by Total number of infants aged 6-10 months

TABLE 3
Demographic characteristics of study population

Age	Sex	
	Male	Female
≤ 6 months	48	28
> 6 months	10	12

TABLE 4
Exclusive breastfeeding rates, predominant breastfeeding rate and timely complementary feeding rate in our study population

	Babies, 0-120 days (n = 70)		Babies, 6-10 months (n = 22)	
	Number	Rate	Number	Rate
Exclusively breastfed	65	0.93	NA	NA
Predominantly breastfed	1	0.01	NA	NA
Complementary feeding started	NA	NA	21	0.95

NA: not applicable.

healthcare providers and were satisfied with the advice given. There were three infants who could not be breastfed during the immediate post-partum stay. In two of these cases, the mother had been advised to express breastmilk.

Discussion

It has been shown in many studies that mothers in India are unable to maintain exclusive breastfeeding and complementary feeding begins late.⁵ However, both the exclusive breastfeeding rate and timely complementary feeding rates in our study were very high. This could be related to the information and support they received from the healthcare providers during the follow-up visits.

Only 21 per cent were able to enumerate at least two specific advantages of breastfeeding. This may indicate that mothers continue to breastfeed as it is the social norm and the programme and the follow-up only play the role of offering constant support. This could be related to the small proportion of pregnant women receiving advice during the antenatal period (22 per cent). A mother who knows the benefits of breastfeeding will not be swayed if abuse of media puts doubts in her mind about the advisability of breastfeeding. The antenatal stage is the best period to discuss these aspects. It is likely that the mother is anxious after the birth of the baby and would be keen to practice the skills of mothercraft at that time, rather than listen to a discourse about the advantages of breastfeeding. The second worrying feature is the late initiation of breastfeeding in some of the infants. This seems to be the problem in many hospitals.^{6,7} Some studies have identified caesarean section as a hindering factor in this regard.⁸ However, it did not seem to have an impact in our study. The delay may have to do with the lack of advice during the antenatal period.⁹

Fortunately, women enrolled in the study continued to feed their babies appropriately, even if they did not receive advice during the antenatal period. The care given during the post-natal period and during follow-up seems to have compensated for that lacuna. This aspect needs to be improved.

TABLE 5
Percentage of mothers of infants up to the age of 6 months who had received advice regarding feeding practices

	<i>n (%)</i>
No. of pregnant mothers who received advice regarding breastfeeding during antenatal period	17 (22.37)
No. of mothers who received advice regarding breastfeeding during the post-natal period	75 (98.7)

TABLE 6
Prevalence of different feeding practices among infants 6 months or younger

Type of feeding	Frequency (<i>n</i> = 76)
No. of mothers who practised demand feeding	56 (73.68%)
No. of mothers who practised scheduled feeding	7 (9.21%)
No. of mothers who continued to feed infants during night	76 (100%)
No. of mothers who resorted to unrestricted feeding	53 (69.73%)
No. of mothers who fed their babies with a bottle	0
Mothers who could enumerate two advantages of breastfeeding	16 (21.05%)
Infants breastfed within 1 h of birth (vaginal delivery, <i>n</i> = 59)	45 (76.27%)
Infants breastfed within 4 h of birth (caesarian section, <i>n</i> = 17)	14 (82.35%)

TABLE 7
Prevalence of the use of commercial milk formula in our study

Prevalence of the use of commercial milk formulae in infants above the age of 6 months	22.73%
Prevalence of the use of commercial milk formulae in all infants in our study	6.12%

As all the infants were hospital born, this study may have a systematic bias and further comparative studies are needed in the community and the hospital to evaluate the impact of the programme. However, this study does give some idea about the impact of the programme in mothers who received antenatal care in, delivered at, and subsequently attended the well-baby clinic of a baby-friendly hospital.

Conclusions

The advice regarding infant feeding practices given in the immediate postnatal period and subsequent visits to the well-baby clinic are effective.

Mothers should receive information regarding proper infant feeding practices during the antenatal period, the immediate postnatal period, and during visits to the well-baby clinic.

It should be ensured that mothers understand the rationale of the practices that are being advised so that good feeding practices are sustained.

Mothers need to be told that commercial weaning foods do not confer any advantages over less expensive supplements.

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