

Trends in Breast Feeding Practices among Mothers at a Tertiary Care Institute

K Ramya, P Murugalatha

Senior Assistant Professors, Department of Pediatrics, Institute of Child Health and Research Centre, Government Rajaji Hospital, Madurai Medical College, Madurai, Tamil Nadu, India

Abstract

Introduction: Breastfeeding is a natural and traditional infant feeding practice throughout the world. Appropriate feeding is crucial for healthy growth and development. Hence, a study of infant feeding practice that is prevalent is essential to outline trends of feeding practices before the formulation of any need-based program.

Aims and Objectives: The objectives of the study were to study the knowledge, attitude, and practice regarding breastfeeding, its correlation with maternal factors and about the introduction of other milk and weaning foods.

Materials and Methods: Mothers of 500 infants and toddlers of ages 3 days to 3 years who were attending GRH, Madurai, were included and provided with a standard questionnaire and results analyzed. Duration of the study was 1 year.

Results: In this study of 500 cases, 40% received antenatal advice. 12.6% mothers breastfed within 1 h while 34.2% breastfed in <6 h. 55.1% of the normally delivered mothers and 4.1% of the cesarean sectioned mothers started breastfeeding within 6 h. 55.2% mothers administered prelacteal feeds to their infants while 44.8% did not. 3/4th expressed their milk when the baby is in NICU. Top feeds started by 63.5% by 4 months, 51% started bottle feeding by 3 months. Early weaning started by 10.54% before 3 months of age mean duration of breastfeeding was 15 months. No correlation was found between the age, parity, nutritional status and family income of the mothers, and breastfeeding practices. A significant correlation was found with the employment status of the mothers.

Conclusion: Majority of mothers had good knowledge of the technique of breastfeeding, and only 4.6% did not show any response. Employment was one of the reasons for the early introduction of bottle feeds. Expression of breast milk is not practiced in this category of mothers due to lack of knowledge regarding the procedure.

Key words: Breastfeeding practices, Employment, Maternal factors, Top up feeds, Weaning

INTRODUCTION

Breastfeeding is a natural and traditional infant feeding practice throughout the world. Pre-modern societies have a high incidence and long duration of breastfeeding. However, in developing countries like India, the newly created economic markets based on highly advanced and imported technologies are promoting the administration of artificial feeds for infants from a very early age.

The prominent area of concern includes minimal feeding of colostrum, delayed initiation of breastfeeding, initiation of prelacteal feeds, nonexclusive breastfeeding in first 6 months of life, early initiation of cows milk, commercial infant feeding, early termination of breastfeeding, and premature introduction of semisolids.

It is a proven scientific fact that all commercial infant milk foods and animal milk are inferior to breast milk, which is nutritious food for infants, readily available, hygienic, and develops emotional bonding and protects against several infections including diarrhea and respiratory infections and saves lives.

Hence, a study of infant feeding practices that is prevalent in any geographical area is essential to outline trends in feeding patterns and before the formulation of any need-based intervention programs.

Access this article online	
 www.ijss-sn.com	Month of Submission : 04-2018
	Month of Peer Review : 05-2018
	Month of Acceptance : 06-2018
	Month of Publishing : 06-2018

Corresponding author: Dr. P Murugalatha, Plot no 419, K.K. Nagar, Madurai -625020, Tamilnadu, India. Phone: +91-9443702345.
E-mail: venkat.vickky@gmail.com

MATERIALS AND METHODS

Mothers of 500 infants and toddlers of ages 3 days to 3 years who were attending GRH, Madurai, were included in the study for 1 year. They were provided with a standardized questionnaire based on which data was collected. Maternal characteristics evaluated included age, family income, socioeconomic status, employment status, and mode of delivery. Of 500 mothers, 100 were selected from postnatal ward from 3rd postnatal day onward to get a more accurate account.

RESULTS

In all 500 mothers having children below 3 years were interviewed at Government Rajaji Hospital. 100 mothers were selected from the postnatal ward from the 3rd postnatal day onward to get a more accurate account of the immediate postnatal management of breastfeeding. The infants and toddlers were subdivided into 5 groups for better analysis of various data [Table 1].

The groups were subdivided based on the family income to get better data about their correlation for the duration of breastfeeding and starting top feeds [Figure 1].

The mothers were divided into two groups based on their employment status [Table 2]. In that employed mothers were 18.6% and unemployed was 81.4%. 41% mothers received antenatal counseling regarding benefits and management of breastfeeding, while 59% received no counseling [Figure 2]. The subjects were also divided into two groups based on the mode of delivery, to know accurately about the duration of starting the breastfeeding [Figure 3]. 82.4% had a vaginal delivery, 3% had assisted vaginal delivery, and 14.6% had cesarean section.

It was noticed that timely suckling in the 1st h of birth was practiced only by 12.6% mothers. 34.2% mothers put their infants to breast between 1 and 6 h [Table 3].

It was observed that 55.1% mothers started breastfeeding within 6 h after vaginal delivery, only 4.1% started breastfeeding within 6 h after cesarean section, 72.62% started only after 1 day following cesarean section.

Of 26 mothers, whose baby was in NICU 69.2%, expressed their milk. 55% mothers administered prelacteal feeds to their infants while 45% mothers did not [Figure 4]. Breastfeeding techniques were adapted by 270 mothers with infants below 1 year [Table 4]. Of 187 mothers whose infants were <4 months old, 93% breastfed on demand, while 7% followed scheduled timings.

In this study, it was found that only 30 mothers used pacifiers, 2 on self-decision and one on the advice of paramedical staff. It was noted that of 313 mothers, whose children were more than 4 months old, 8 had stopped breastfeeding before their children attained 4 months of age [Table 5].

In this study, 63.5% mothers have started top feeds in the first 4 months itself even though IAP and WHO recommends exclusive breastfeeds till 6 months of age

Table 1: Age group of child divided into 5 groups

Age group	Number of child (%)
3 days – 1 month	100 (20)
1–4 months	87 (17.4)
5–11 months	83 (16.6)
1–2 years	106 (21.2)
>2 years	124 (24.8)

Table 2: Employment: Employed mothers: 93 (18.6%) unemployed mothers: 407 (81.4%)

Nature of work	Number of cases (%)
Agricultural coolies	51 (54.8)
Manual laborer	15 (16.01)
Company worker	19 (20.4)
Clerk	4 (4.3)
Hospital worker	2 (2.2)
Servant maids	2 (2.2)

Table 3: Time of first breastfeed after delivery

Time	Number of cases (%)
<1 h	63 (12.6)
1–6	171 (34.2)
6–12	89 (17.8)
12–24	74 (14.8)
2 days	72 (14.4)
3 days	24 (4.8)
4 days	2 (0.4)
>4 days	5 (1)

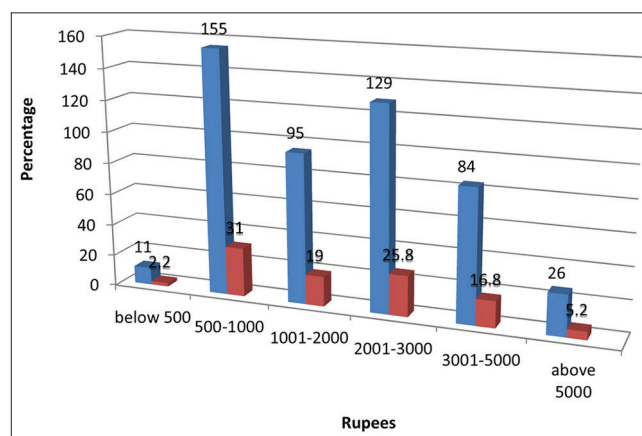


Figure 1: Family income

[Table 6]. It was found that introduction of weaning food was practiced by 10.54% of mothers before 3 months, 91.38% by 5–6 months and all practiced before 1 year [Figure 5].

DISCUSSION

This study conducted in 500 mothers having children aged 3 days to 3 years has revealed that the most common method of infant feeding was breastfeeding. This indicates clearly that the breastfeeding still remains popular and is also in accordance with reports from different parts of India.^[1-5] It was a hospital based study, only 40.2% of mothers had received antenatal counseling [Figure 2]

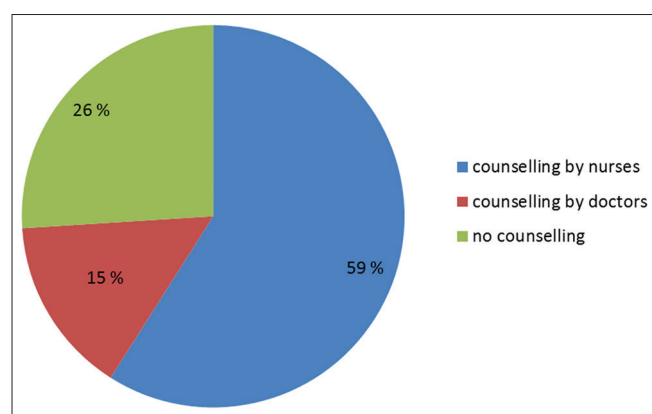


Figure 2: Antenatal counseling

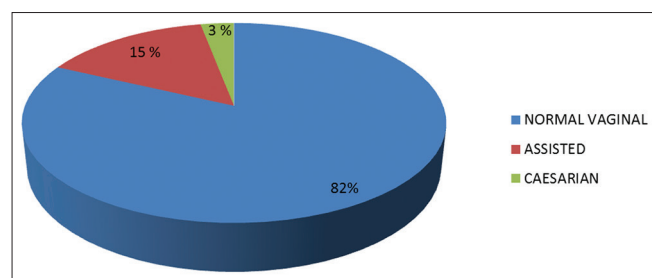


Figure 3: Type of delivery

Table 4: Breastfeeding technique

Technique	n (%)
Position of breastfeeding	
Mostly sitting	263 (97.4)
Mostly lying	7 (26)
Nipple and most of the areola inside the mouth	260 (96.3)
Sucking was painless	232 (85.93)
Complete emptying of one breast only	31 (11.48)
Complete emptying of one breast followed by second	47 (17.4)
Complete emptying of both breasts	192 (71.1)
Knows starting feeding at alternate breasts	207 (76.7)
Know placing the finger between gums and areola to release the suction	146 (54.04)
Burping after feeds	254 (94.07)

regarding breastfeeding; 25.6% from doctors and 14.6% from nursing staff. This may be due to the notion that breastfeeding is the norm, or due to lack of motivation of the medical staff or excessive workload.

The mean duration of breastfeeding in employed class was found to be 9.3 months while in unemployed was 16.3 months. A significant correlation was found between the duration of breastfeeding and employment status of the mothers. This was partly due to the unfavorable working condition. As in other studies, there was no correlation of duration of breastfeeding with age, parity, religion, nutritional status, family income, and maternal education.

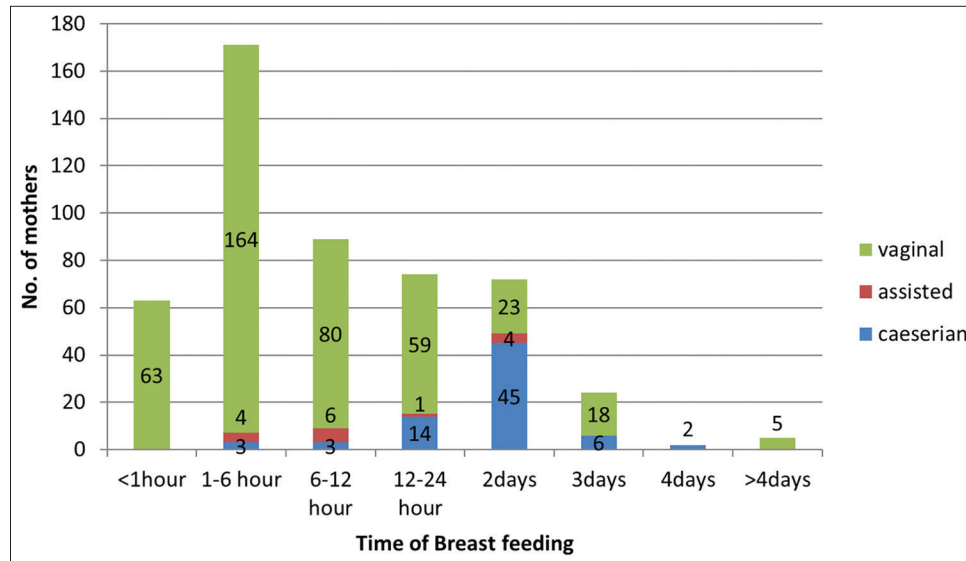
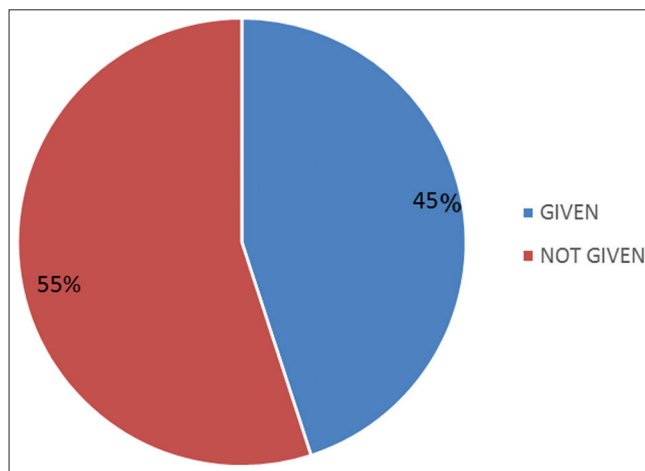
In this study suckling in the 1st h of birth was only 12.6% and even within 6 h was only 46.8% [Table 3], by applying Chi-square test, we tried to deduce the association between the time of first breastfeed after delivery with the type of delivery and found to be very highly significant. 55.1% of normally delivered mothers started breastfeeding within 6 h but only 4.1% after cesarean section [Figure 4]. Expressed milk was given by 18 (69.2%) of 26 mothers, whose baby were in NICU. Advice regarding the expression of breast milk was given by medical staff in 7 cases.

Prelacteal feeds were given to 55.21% of infants [Figure 5]. Kumar *et al.* and Srivastava *et al.* have also reported a similar percentage of giving prelacteal feeds in their studies. The prelacteal feeds received are plain water, glucose water, honey, fruit juice, tea, milk powder, and oil with Jaggery. Prelacteal feeds were given by spoon, filler, cloth wick, bottle, finger, and with golden ring. These unhygienic modes of administration of giving prelacteal feeds were more commonly observed in lower income and less educated mothers. The practice of giving prelacteal feeds is common in many parts of the country, the preparations varying from place to place. They are the source of infection; there is a high probability of these prelacteal feeds getting aspirated. The fact that the small amount of milk produced during the 1st few days is sufficient for the newborn was not well appreciated by the mothers. In the present study, colostrum was not denied to any baby due to any wrong notion of it being bad. However, in studies of Kumar *et al.* and Srivastava *et al.*^[2,3] colostrum were given only to 16% and 17%, respectively.

Of 187 mothers with their infants below 4 months, 8 mothers gave scheduled feeds, and 179 mothers were giving breastfeeds on demand. Of 187 mothers with their infants aged below 4 months, 30 mothers used pacifiers. Use of pacifiers has to be strongly discouraged as it will result in poor sucking technique, the risk of infection and missed opportunity to breastfeed.

Table 5: Duration of breastfeeding

Age group month	Total no	Mother continuing bf	Mothers who stopped breastfeeding at months									
			1	2	3	4	5-6	6-10	11	12-15	16-24	>24
0-1	100	100										
1-4	87	83	4									
5-11	83	63	2			2	4	12				
1-2 years	106	22				4	8	12		40	20	
2-3 years	124						12	4	10	40	40	18


Figure 4: Correlation of time of first breast feed with mode of delivery

Figure 5: Prelacteal feeds

In this study, it was found that 97.4% of mothers were breastfeeding at 4 months, 78.3% at 1 year, and 14.5% at 2 years. Similar trends were noticed in other studies. The reason for stopping breastfeeding is mentioned in Table 6.

Regarding mother's knowledge of the advantages of breastfeeding it was observed that 79.3% of mothers knew that mothers milk is the best milk,^[6,7] 55% knew

that baby remains healthy, 40.4% suggested that it is pure and cost nothing, 35.1% knew that it is more nutritious and hygienic, and 25.9% knew that there is less chance of infection [Table 7].

Regarding starting top feeds, 63.5% started top feeds in the first 4 months of life, and 8% by 6 months of life [Table 8] [8-10] WHO recommended exclusive breastfeeding in the first 6 months of life. Exclusive breastfeeding means that except for breast milk no other food or fluids, including prelacteal feeds and water should be given.

In this study, it was found that 10.54% of mothers started weaning with semisolids by 3 months and 51.4% by 4 months [Figure 6]. The early introduction may become a substitute instead of a supplement. Early weaning also affects impoverished families in terms of cost of food and possibly illness needing medical attention.

Due to the popularity gained by tinned infant weaning foods, it was noted that this accounted for 44.07% of the first weaning food. This trend was prevalent even in the low-income group. They cost 10 times higher than the natural food and hence its use has to be discouraged. Other

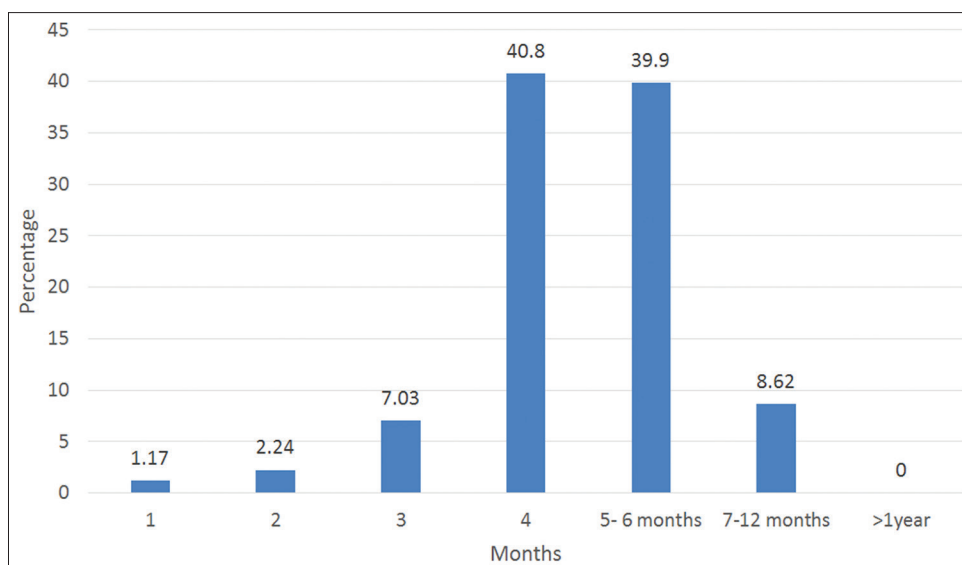


Figure 6: Introduction of weaning foods

Table 6: Reasons for stopping breastfeeding

Reasons	n (%)
Felt that breast milk was inadequate	156 (67.2)
Infant was taking top feeds and breast milk decreased	47 (20.2)
Infants refused to breastfeed	
Decreased breast milk	38 (16.3)
Introduction of bottle	32 (13.7)
Introduction of other milk	
Introduction of cereals	25 (10.8)
Introduction of sweeter weaning foods	36 (15.5)
Addition of sugar or sugar candy	
Mothers ill health	7 (3.01)
Subsequent pregnancy	39 (16.8)
Working mother	33 (14.2)
Figure conscious	0
Embarrassment in breastfeeding	0
Local breast problems	0
Cracked nipple	
Inverted nipple	
Felt that duration of breastfeeding was adequate	41 (17.7)
Infant refused to take other feeds	27 (11.6)

Table 7: Maternal concept of advantages of breastfeeding

Advantages	n (%)
It is pure and costs nothing	193 (40.4)
Clean and sterile	124 (25.9)
No pots and pan	71 (14.9)
Child remains healthy	263 (55.0)
Skin to skin contact	83 (17.4)
Less infection	124 (25.9)
More nutritious and hygienic	168 (35.1)
Gives natural immunity	105 (22)
Helps in preventing further conception	43 (9)
Mothers milk is the best milk	379 (79.3)
No response	22 (4.6)

Table 8: Introduction of top milk in first 4 months

Age in months	Tinned milk (%)	Cow's milk (%)
1 month	0	44 (11)
2 months	17 (4.25)	42 (10.5)
3 months	36 (9)	27 (6.75)
4 months	22 (5.5)	66 (16.5)

weaning foods included rice, mashed banana, potato, and biscuits as the first weaning food.

CONCLUSION

In this study of 500 cases, 40% received antenatal advice from medical personal. Initiation of breastfeeding within 6 h after delivery was found in about half the study participants and it was very poor after cesarean section. 3/4th expressed their milk when the baby is in NICU. Mean duration of breastfeeding was 15 months in the unemployed group. It was much less in employed class. The practice of prelacteal feeds is still continuing, and in a large number of cases, advice was given by medical and paramedical personnel. Colostrum feeding is uniformly practiced irrespective of socioeconomic and literacy levels. Majority of mothers had good knowledge of the technique of breastfeeding, and only 4.6% did not show any response. Top feeds started by 63.5% by 4 months and 51% started bottle feeding by 3 months. Early weaning was practiced by 10.54% before 3 months of age. Employment was one of the reasons for the early introduction of bottle feeds. Expression of milk was not practiced in this category of mothers due to lack of knowledge regarding the procedure.

REFERENCES

1. Kapil U, Verma DC, Sachdev HP, Nanasejara NG. Breast feeding practices in schedule caste communities in Haryana state. *Indian Pediatr* 1994;31:1227.
2. Bavdekar SB, Bavdekar MS, Kasla RR, Ragjnanda KJ, Joshi SY, Hathi GS. Infant feeding practices in Bombay Slums. *Indian Pediatr* 1994;31:1083-7.
3. Gupta ML, Davr DV, Thawani YP. Review of child rearing practice. *Indian Pediatr* 1980;17:262-5.
4. Bahl L, Kaushal RK. Infant rearing practises and beliefs in rural inhabitants of Himachal Pradesh. *Indian Pediatr* 1987;24:903-6.
5. Kushwaha KP, Mathur GP, Prakash O. Infant feeding practices of eric-Urban areas of Gorakhpur. *Indian Paediatr* 1987;24:895-8.
6. Deenadayalan DM, Theranirajan E, Sangeetha P, Karthick AR, Ramvivek VM, Parthasarathy P, et al. Knowledge regarding breast feeding and support for breastfeeding among postnatal mothers in Tamil Nadu. *J Med Sci Clin Res* 2017;5:23153-60.
7. Radhakrishnan S, Balamurugan S. Prevalance of exclusive breast feeding practices among rural women in Tamil Nadu. *Indian J of Rural Health Care* 2012;1:64-7.
8. Parks EP, Shaikhalil A, Groleau V, Wendel D, Stalings VA. *Nelson Textbook of Pediatrics*. 20th ed. Ch. 45. Philadelphia, PA: Elsevier publication; 2016. p. 256.
9. Ghai OP. *Essentials of Paediatrics*. 8th ed. New Delhi: CBS Publishers and Distributors; 2013.
10. Agarwal KN, Agarwal DK. Infant feeding in India. *Indian J Paediatr* 1981;49:392.

How to cite this article: Ramya K, Murugalatha P. Trends in Breast Feeding Practices among Mothers at a Tertiary Care Institute.. *Int J Sci Stud* 2018;6(1):71-76.

Source of Support: Nil, **Conflict of Interest:** None declared.