

Original Research Article

Feeding practices among under two years children in urban slum, Bengaluru: a cross sectional study

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ABSTRACT

Background: Exclusive breastfeeding is the optimum method of feeding in first 6 months of life. It meets nutritional requirement of baby. There are practices of early introduction of top feeds and late introduction of semi-solid feed in urban slums in India. This study was conducted to assess feeding practices among under 2 years children in an urban slum area.

Methods: A community based cross sectional study was conducted in one of the urban slums in Bengaluru among 190 caregivers of children aged from 6 months to 2 years from January 2023 to March 2023. Questionnaire was used to collect information regarding feeding practices and data was analysed using JAMOV v2.3.26.

Results: Among 155 (81.58%) of the mothers were literates, 97 (51.06%) belongs to class IV socioeconomic status. Regarding feeding practices, 65 (34.21%) of them initiated breastfeeding between 1-4 hours after delivery, 137 (72.11%) of them fed colostrum to the babies, pre-lacteal feeds were given in 46 (24.21%) of children, exclusive breastfeeding was done in 106 (55.79%) of babies. There was significant association between exclusive breastfeeding with caregivers' socioeconomic status, type of family ($p < 0.05$). There was significant association between pre-lacteal feeds with mothers' education status, socio-economic status ($p < 0.05$).

Conclusions: There is a need for health education regarding importance of exclusive breastfeeding and ill-effects of pre-lacteal feeds. Sociodemographic factors also play an important role in these feeding practices. Hence government should take necessary steps to improve some of the demographic factors who are living in urban slums.

Keywords: Exclusive breastfeeding, Pre-lacteal feeds, Urban slum

INTRODUCTION

A good nutrition is essential better growth and development especially in children in first 1000 days which is a crucial phase of maximum growth and development of the body.¹ Exclusive breastfeeding is the optimum method of feeding in first 6 months of life. It is a common feature of all cultures because our survival has depended on it.²

It has been proven that exclusive breastfeeding reduces mortality and morbidity against infectious diseases and have lower risk admission to the hospital.^{3,4} Its well-

established fact that exclusive breastfeeding for first 6 months of life and continued breastfeeding with complementary foods up to 2 years of age reduced child mortality and saves lives of over 820,000 children below 5 years worldwide, every year.^{4,5}

Some of the advantages of exclusive breastfeeding: it is safe, clean, hygienic. It meets nutritional requirement of baby. It contains antimicrobial factors that protect against infectious diseases. Easily digested and prevents malnutrition.⁶

Unfortunately, due to customs as well as misbeliefs, pre lacteal feeds are common in our society. India, pre lacteal

feeds include honey, sugar water and ghee etc. This may be specific to a family, community and the religion.⁷

There are practices of early introduction of top feeds and late introduction of semi-solid feed in urban slums in India. Nutrition foundation of India (NFI) have done some studies in major metropolitan cities in India revealed there the breach in the breastfeeding practices. The introduction of complementary foods is markedly delayed and the foods lack the consistency, energy density and are fed in inadequate amounts and in unhygienic ways.⁸

There are many other surveys done time after time which reports high prevalence of pre lacteal feeding as well as late initiation of complementary feeds and varies from state to state.

Therefore, this study was conducted to assess feeding practices and to determine factors influencing if any, among under the two years children in an urban slum area.

Objectives

Objectives were to assess feeding practices among under 2 years children and to determine the factors influencing pre-lacteal feeds.

METHODS

Study design

Study design was a community based cross sectional study.

Study period

The study conducted from the January 2023 to March 2023.

Study area

Urban field practice area (slums) of H. Siddaiah Urban primary health centre attached to Bangalore medical college and research institute (BMCRI).

Study population

Mothers of children under 2 years of age were included in the study.

Sample size and sampling technique

Based on previous study conducted by Tiwari et al based on the prevalence of pre lacteal feeds in urban slums, the sample size came to around 181, by considering five percentages precision and ninety five percentages confidence interval.⁹ After obtaining consent from the

institutional ethical committee purposive sampling technique was used to recruit the study participants who fulfilled inclusion criteria were interviewed using semi-structured, pre validated questionnaire after obtaining consent from study participants.

Criteria for study participant selection

Mothers of children aged 6 months-2 years were included. Those who are willing to give informed consent.

Study tool

A pretested semi-structured questionnaire was used to collect data from the mothers which includes socio-demographic data, breastfeeding practices, pre lacteal feeds, etc.

Data collection

This study was conducted in the field practice area of H. Siddaiah Urban health centre which is an integral part of department of community medicine, BMCRI, Bengaluru, Karnataka. Out of many slums served, a slum was chosen by simple random sampling and those who fulfilled the inclusion criteria were included using purposive sampling in the study after obtaining informed consent from participants. A predesigned, pretested semi-structure questionnaire prepared and interviewed in local language. The participants' anonymity, confidentiality was ensured. Totally information of 190 participants could be collected.

Statistical analysis

The data collected was analysed using JAMOWI v2.3.26. Socio-demographic variables were analysed in terms of mean, standard deviation, frequency (N) and percentage (%). Chi-square test was used to compare categorical variables and to test association. A $p < 0.05$ was taken as statistically significant. Data results were represented in the form of tables and figures.

RESULTS

In the present study, data was collected from one hundred and ninety mothers of infants and children aged 6-24 months. The mean age of respondent/mother was 22.6 ± 4.7 years. All the mothers were aware about breastfeeding and its importance.

The socio demographic characteristics of the study participants are shown in Table 1. The 45.2% were female children, 54.2% were male children. The 85.58% of the mothers were literates. Among the 190 participants 155 (81.58%) were literates and 35 (18.42%) were illiterates. The ninety-seven (51.06%) belong to class IV socioeconomic status according to the modified Kuppuswamy classification. The one hundred and

thirteen (59.47%) were from the three generation families. The 126 (66.32%) were Hindus, 53 (27.89%) were Muslims as well as the 11 (5.79%) belonged to other religions.

Table 1: Sociodemographic profile.

Characteristics	N	Percentages (%)
Sex of the child		
Male	103	54.21
Female	87	45.79
Education		
Illiterate	35	18.42
Literate	155	81.58
Socioeconomic status		
Class III	37	19.47
Class IV	97	51.06
Class V	56	29.47
Type of family		
Nuclear	77	40.53
Three generation	113	59.47
Religion		
Hindu	126	66.32
Muslim	53	27.89
Others	11	5.79

Feeding practices shown in the Table 2, majority of the babies received breastfeeding between 1-4 hours, 54 (28.42%) initiated breastfeeding within 1 hour, 41 (21.58%) initiated breastfeeding between 4-24 hours and 30 (15.79%) initiated breastfeeding after 24 hours because their babies were admitted in neonatal intensive care unit for complications. Colostrum fed for 137 (72.11%) children. Pre lacteal feeds were given to 46 (24.21%) of children. The twenty-five (13.16%) of mothers are still breastfeeding their children even after 6 months. In majority of children, 84 (55.79%) complementary feeds were started before six months of age (Figure 1).

There was significant association found between some of sociodemographic factors and exclusive breastfeeding (Table 3). There found to be significant association between exclusive breastfeeding and socioeconomic status ($p=0.003$). Between nuclear and three generation families, three generation family mothers, exclusive breastfeeding was more among three generation family and is significantly associated with exclusive breastfeeding ($p<0.0001$). With respect to religion, among mothers belonging to Hindu religion, exclusive breastfeeding done in eighty-three (65.87%), among Muslim religion, exclusive breastfeeding was done in eighteen (33.96%). There found to be significant association between exclusive breastfeeding and religion ($p<0.0001$).

There was significant association found between some of sociodemographic factors and pre-lacteal feeds (Table 4).

There was significant association found between pre-lacteal feeds and mother's education ($p<0.0001$). Among class III socioeconomic status ten (27.3%) mothers gave pre-lacteal feeds, among class IV socioeconomic status fifteen (15.46%) mothers gave pre-lacteal feeds and among class V socioeconomic status twenty-one (37.5%) mothers gave pre-lacteal feeds. There found to be significant association between pre-lacteal feeds as well as the socioeconomic status ($p<0.0001$). No significant association found between pre-lacteal feeds and the religion.

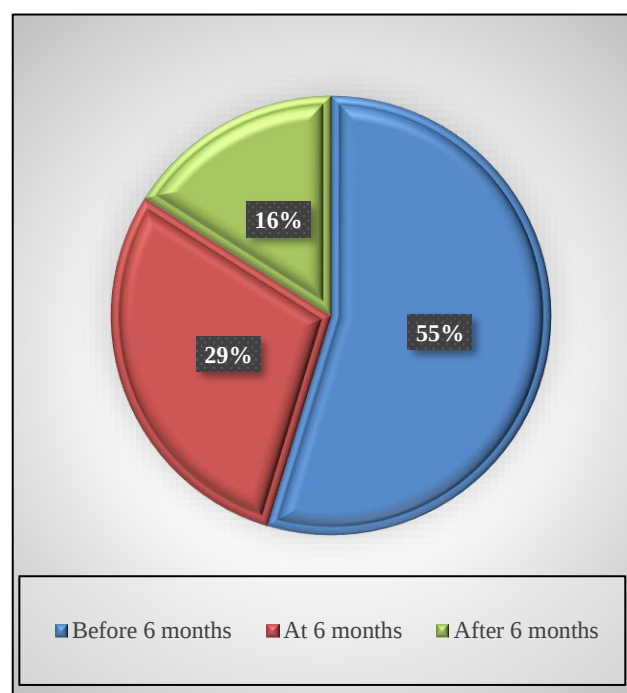


Figure 1: Initiation of the complementary feeding.

Table 2: Feeding practices of children.

Feeding practices	N	Percentages (%)
Initiation of breastfeeding (Hour)		
Within 1	54	28.42
1-4	65	34.21
>4 to 24	41	21.58
After 24	30	15.79
Colostrum feeding		
Fed	137	72.11
Not fed	53	27.89
Pre lacteal feeds		
Given	46	24.21
Not given	144	75.79
Exclusive breastfeeding		
Yes	106	55.79
No	84	44.21
Mothers still breast feeding after the six months		
Yes	61	32.10
No	129	67.89

Table 3: Association between exclusive breastfeeding and sociodemographic factors.

Sociodemographic factors	Exclusive breastfeeding, N (%)			Chi square value (χ^2), p value
	Yes	No	Total	
Mothers' education				
Literate	91 (58.71)	64 (41.29)	155 (81.57)	2.91, 0.088
Illiterate	15 (42.86)	20 (57.14)	35 (18.42)	
Total	106	84	190	
Socioeconomic status				
Class III	29 (78.38)	8 (21.62)	37 (19.47)	11.50, 0.003
Class IV	53 (54.64)	44 (45.36)	97 (51.05)	
Class V	24 (42.86)	32 (57.14)	56 (29.47)	
Total	106	84	190	
Type of family				
Nuclear	24 (31.17)	53 (68.83)	77 (68.14)	31.82, <0.0001
Three generation	82 (72.57)	31 (27.43)	113 (31.86)	
Total	106	84	190	
Religion				
Hindu	83 (65.87)	43 (34.13)	126 (66.32)	15.91, <0.0001
Muslim	18 (33.96)	35 (66.04)	53 (27.89)	
Others	5 (45.45)	6 (54.54)	11 (5.79)	
Total	106	84	190	

Table 4: Association between pre-lacteal feeds and sociodemographic factors.

Sociodemographic factors	Exclusive breastfeeding, N (%)			Chi square value, p value
	Yes	No	Total	
Mothers' education				
Literate	18 (11.61)	137 (88.39)	155 (81.57)	72.77, <0.0001
Illiterate	28 (80)	7 (20)	35 (18.42)	
Total	46	144	190	
Socioeconomic status				
Class III	10 (27.30)	27 (72.97)	37 (19.47)	9.59, 0.008
Class IV	15 (15.46)	82 (84.54)	97 (51.05)	
Class V	21 (37.50)	35 (62.50)	56 (29.47)	
Total	46	144	190	
Religion				
Hindu	29 (23.02)	97 (76.98)	126 (66.32)	0.13, 0.94
Muslim	13 (24.53)	40 (75.47)	53 (27.89)	
Others	3 (27.27)	8 (72.73)	11 (5.79)	
Total	46	144	190	

DISCUSSION

As urban population is increasing every year, the urban poor also increasing proportionately. Therefore, millions of children are also part of this urban poor are suffering from ill-health and malnutrition. For a newborn baby breastfeeding is the wholesome food and is responsible for growth and development in first 6 months of age. Infant and child feeding includes breastfeeding and complementary feeding.

In the current study, the mean age of study participants (mothers) was 22.6±4.7 years, in a study conducted by Tiwari et al the mean age of the respondents was 23.4±5.2 years.⁹ In this study majority of the mothers were literates 155 (81.58%), in a study conducted by the

Jayarama et al 78.65% of the respondents (mothers) were literates.¹⁰ In a study conducted by Raval et al 67.9% were literates.¹¹ In this study majority of the respondent household belonged to three generation family 113 (59.47%) and 77 (40.53%) belonged to nuclear family. In a study conducted by Roy et al¹², 65.9% were from nuclear families, Tiwari et al⁹ conducted similar where 76.7% belonged to nuclear family, Rajesh et al conducted a study where 64% of the respondents belonged to nuclear family.¹³ In our study majority of the respondents 66.32% belonged to Hindu religion, 27.89% belonged to Muslim religion and rest other religion. Raval et al conducted a study in which 89.3% belonged to Hindu religion and 10.7% belonged to Muslim religion.¹¹ Jeyakumar et al conducted a study, in which 67.4% were Hindus, 25.6% were Muslims and rest others.¹⁴

Rajesh et al conducted a study where 70.7% were Hindus, 24% were Muslims and rest were Christians.¹³

In the current study, majority of the children 34.21% were breastfed between 1-4 hours followed by 28.42% children were breastfed within 1hr. Raval et al conducted a study in which 38.1% were breastfed within 1 hour of the delivery.¹¹ In study conducted by Roy et al 16.67% of children were breastfed within 1 hour of the delivery.¹² Tiwari et al conducted a study showed that 15% of children were breastfed within 1 hour of the delivery.⁹ In this study 24.21% of children were given pre-lacteal feeds. Tiwari et al conducted a study showed that 63.8% of children received pre-lacteal feeds.⁹ In study conducted by Roy et al 29.16% of children received pre-lacteal feeds.¹² Rajesh et al conducted a study where 34% of children received pre-lacteal feeds.¹³ Raval et al conducted a study where 61.9% of children received pre-lacteal feeds.¹¹ In this study 55.79% children were exclusively breastfed. Roy et al conducted a study showed that 28.33% children were exclusively breastfed.⁹ Rajesh et al conducted a study where 22% of the children were exclusively breastfed.¹³

In this study there was significant association found between socioeconomic status, type of family and religion with exclusive breastfeeding. There was significant association found between mother's education status, socioeconomic status with pre-lacteal feeds. Tiwari et al conducted a study showed mothers' education was significantly associated with exclusively breastfeeding.⁹ In study conducted by Roy et al which showed association between EBF and mothers' education.¹² Devang et al conducted a study in which there was significant association between socioeconomic status, mothers' education and type of family with pre-lacteal feeds.¹¹

Limitation

The cross-sectional study limits deriving causality. The complementary feeding practices were not measured and it was reported by mothers. Since the study was done in urban setting which differ from other settings, the results are not generalizable to general population.

CONCLUSION

All the above studies show that in urban slums exclusive breastfeeding is low compared to NFHS-5 data which is 59.6% in urban India. This shows that in urban slums, the knowledge regarding timing of exclusive breastfeeding is poor among mothers. Therefore, interventions are required to address regarding importance of exclusive breastfeeding, harmful effects of pre-lacteal feeds as well as the importance of the complementary feeding. Effective health education for behavioural change should therefore important objective for the ensuring better infant feeding.

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