



Research Article

Breastfeeding Practices in Slums of Delhi, India: A Cross-Sectional Study

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Abstract

Breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants. The WHO recommends that for the first six months of life, infants should be exclusively breastfed to achieve optimal growth, development, and health. With the primary objective to identify breast feeding practices in mothers of infants 1-6 month of age, this cross-sectional study was conducted in three slums of three different districts of Delhi. A sample of 425 infants (1-6 months of age) and their mothers was selected by multi-stage sampling and primary data was collected over a period of 3 months from October 2018 to December 2018 by interviewing the mothers using a structured interview schedule. It was found that breastfeeding was initiated within one hour of birth in 39.6 % of the infants, Colostrum was given to 80.0 percent of the infants and the rate of exclusive breastfeeding was found to be 66.4 percent, which is much less than the desired optimal practice. Based on the findings of this study, it is recommended that more focus should be given on interpersonal communication, health education and social and behaviour change communication regarding breastfeeding practices at different levels and orientation and training of health personnel regarding optimal breastfeeding practices should be reemphasized.

Keywords: Exclusive breastfeeding, Infant, Colostrum, Prelacteal feed, Health education.

Introduction

Breastfeeding is the feeding of babies and young children with milk from a woman's breast. Breast milk alone is sufficient for nourishment for infants after birth and in fact, it is the ideal food for them for the first few months of life. It is the nurture provided by the nature⁽¹⁾.

Breastfeeding has substantial benefits to both the baby and the mother. It fully meets the nutritional requirements of the infant in first few months of life. It is easily digested and utilized by both the normal and premature babies. Breastfeeding protects against malnutrition. It is safe, clean,

hygienic, and available to the infant at correct temperature.⁽²⁾

Similarly, breastfeeding has many benefits for mother also. Early initiation of breastfeeding lowers the mother's risk of postpartum haemorrhage and anaemia⁽³⁾. Exclusive breastfeeding usually delays the return of fertility through lactational amenorrhoea and hence can act as natural contraceptive for first few months after delivery. It promotes bonding between mother and child⁽²⁾. There are lower risk of postpartum depression in mothers who breastfed their children⁽⁴⁾. For breastfeeding mothers, one

very important health benefit is reduced risk of breast cancer⁽⁵⁾. Breastfeeding for longer duration of time also protects mother from ovarian cancer and endometrial cancer⁽⁶⁾. Breastfeeding also confers economic gain to the mother and the family.⁽⁷⁾

The WHO recommends that for the first six months of life, infants should be exclusively breastfed to achieve optimal growth, development, and health. Thereafter, to meet their evolving nutritional requirements, infants should receive nutritionally adequate and safe complementary foods, with continued breastfeeding up to two years of age or beyond. It also recommends that initiation of breastfeeding should be within the first hour of life and breastfeeding should be on demand - that means, it should be as often as the child wants day and night⁽⁸⁾.

Exclusive breastfeeding means that the infant receives only the breast milk. No other liquids or solids are given- not even water- with the exception of oral rehydration solution, or drops/syrups of vitamins, minerals or medicines.

The current World Health Assembly 2025 target is to achieve exclusive breastfeeding rate among children less than 6 months of age to at least 50 percent in most countries globally⁽⁹⁾.

To generate awareness about breastfeeding, every year "breast feeding week" is celebrated during first week of August⁽¹⁰⁾.

Despite all the potential benefits of breastfeeding, especially exclusive breastfeeding, and strong evidences in support of practicing exclusive breastfeeding for the first six months of life, its prevalence have remained low worldwide. Globally, only 40 percent infants less than 6 months of age are exclusively breastfed and only 42 percent of newborns are put to the breast within the first hour of birth.⁽¹¹⁾ According to NFHS-4, In India exclusive breast feeding (up to 6 months of age) is practiced by only 54.9% of the mothers. In Delhi NCT (National Capital Territory), it is practiced by only 49.8% of the mothers. Initiation of breastfeeding within one

hour of birth is seen in only 41.6 % of the Indian infants and only 28.0 percent in Delhi NCT.⁽¹²⁾

Although breastfeeding is very much prevalent in Indian society, a large number of women practice non exclusive breast feeding. In view of different infant feeding practices in different population groups, the infant feeding practices needed to be studied among mothers who are of low socio-economic status, have low educational status, lack knowledge about health and other related issues, live in poor unhygienic environment and compromised conditions of slums. These are the stakeholders who will benefit the most from it and still these are the ones who do not know the importance of exclusive breastfeeding and unknowingly follow faulty breastfeeding practices.

This study was planned to identify breast feeding practices in mothers of infants 1-6 month of age living in slum area. Further it was planned to find out association, if any, between breastfeeding practices and infant morbidity. In this article we have presented our findings on breastfeeding practices. Other findings will be presented elsewhere.

Materials and Methods

This cross-sectional descriptive study was conducted in three slums selected by simple random sampling among 11 districts of Delhi. The selected slums were Kusumpur Pahari, Rangpuri Pahari and Govindpuri situated in three different districts of Delhi.

The sample size was calculated assuming the prevalence of exclusive breastfeeding to be 50%, confidence interval 95% (5% level of significance), and 5% absolute precision. The calculated sample size was 384. Additional 10 % was added in the calculated sample size and finally a sample of 425 infants (1-6 months of age) with their mothers was selected by multi-stage sampling. The data collection was conducted over a period of 3 months from October 2018 to December 2018. The primary data was collected by interviewing the mothers using a pre-tested

structured interview schedule. Data was entered in Microsoft Excel 2007 spreadsheet and analysis was done using IBM SPSS Software version 20. As per the objectives of the study, univariate and bivariate tables were generated. The data was presented in frequency tables and figures & graphs.

Ethical considerations were addressed as per the standard guidelines. Ethical approval for the study was obtained from Institutional Review Board of The National Institute of Health and Family Welfare (NIHFW), New Delhi. Prior permission for data collection was taken from competent administrative authority. The purpose and other details of the study were explained to the mothers using PIS (Participant Information Sheet) and PICF (Participant Informed Consent Form) was used to get informed written consent before interviewing them. Confidentiality of the participants was maintained throughout the study and thereafter.

Result

Socio-Demographic Characteristics

Out of the total 425 mother-infant pairs who participated in the study, 39.3% were living in nuclear family while 60.7% were living in joint family. The mean family size was 6.64 (SD: \pm 3.017). According to B.G. Prasad scale (Updated 2018) 47.1 % belonged to social class 4, 34.6 % belonged to social class 3, 10.8% to social class 2 whereas 6.4% belonged to social class 5. The mean age of the mothers was 24.4 years. (SD \pm 3.5). Majority of the participants (86%) were Hindu, whereas 12 % were Muslim by religion. Majority 30.8% were educated up to high school. 21.4% mothers were educated up to intermediate and above while 21.2% mothers were educated up to primary school and 26.6% of the mothers were illiterate. 89% of the mothers were housewives or unemployed whereas 11% were employed.

Out of 425 infants, 56% were male and 44% were female. In this study, infants aged 1 month to 6 month were included. Age and birth-order of the infants are shown in table 1.

Breastfeeding after birth

In this study, it was found that 100% of the infants were breastfed after birth.

Time of initiation of breastfeeding

Breastfeeding was initiated within 1 hour in only 36.9 % of the infants. The distribution was similar in both male and female infants as depicted in table 2.

Mode of feeding after birth

After birth majority of the infants (96.5%) were exclusively breastfed. Only 3.5% of the infants were given partial (non-exclusive) breastfeeding at the time of birth. The distribution was almost similar in male infants and female infants, which is shown in table 3.

Colostrum

Out of 425 infants, majority (80%) were given colostrums. Among male infants, 77.7 % were given colostrum while among female, 82.9 % were given colostrum. (Fig. 1)

Pre-lacteal feed and its type

Pre-lacteal feeding was not very uncommon in this study population. 30% of the infants were given pre-lacteal feed, 70% infants didn't received pre-lacteal feed. As far as type of pre-lacteal feed is concerned, the most common pre-lacteal feed was Ghutti which was given to 36.2 % of the infants. The second most common was Honey-water (22.8 %) followed by non-human milk (19.7 %), milk substitute (13.4 %) and tea (7.9%).

Current breastfeeding Practice and Current mode of feeding

At the time of interview 66.4 % infants were being given Exclusive breast feeding. 16.5 % were being Partial breastfed; 7.1 % were being given predominant breastfeeding while 10.1 % were being given complementary feeding. For the purpose of present study, 'Partial breastfeeding', 'predominant breastfeeding' and 'complementary feeding' were grouped into one category called Non-Exclusive breastfeeding. So, Practice of exclusive breastfeeding was 66.4% while practice of non-exclusive breastfeeding was 33.6 %. Type of breastfeeding at the time of interview is shown in figure 2.

Exclusive breastfeeding at birth and at present (time of interview)

Figure 3 shows the rate of breastfeeding at birth and at present across the different age group of the

infant. The rate of exclusive breastfeeding was 96.5% at the time of birth overall. Decreased rates were found when the rates were observed in different age groups.

Table 1: Age and Birth order of the infant

Characteristics	N (425)	%
Age of the infant		
1-2 month	72	16.9
2-3 month	72	16.9
3-4 month	89	20.9
4-5 month	100	23.5
5-6 month	92	21.6
Birth order of the infant		
1	193	45.4
2	134	31.5
3	66	15.5
4 or more than 4	32	7.5
Total	425	100.0

Table 2: Time of initiation of breastfeeding and its gender-wise distribution

Time	Gender of the infant					
	male		female		Total	
	n	%	n	%	n	%
Within 1 hour	87	36.6	70	37.4	157	36.9
1 – 3 hour	62	26.1	54	28.9	116	27.4
3 – 24 hour	47	19.7	28	15.0	75	17.6
1 – 2 days	31	13.0	17	9.1	48	11.3
After 2 days	11	4.6	18	9.6	29	6.8
Total	238	100.0	187	100.0	425	100.0

Table 3: Mode of feeding after birth

Mode of feeding after birth	Gender of the infant					
	Male		Female		Total	
	n	%	n	%	n	%
Exclusive breastfeeding	230	96.6	180	96.3	410	96.5
Partial breastfeeding	8	3.4	7	3.7	15	3.5
Total	238	100	187	100	425	100

Fig. 1: Colostrum was given or not

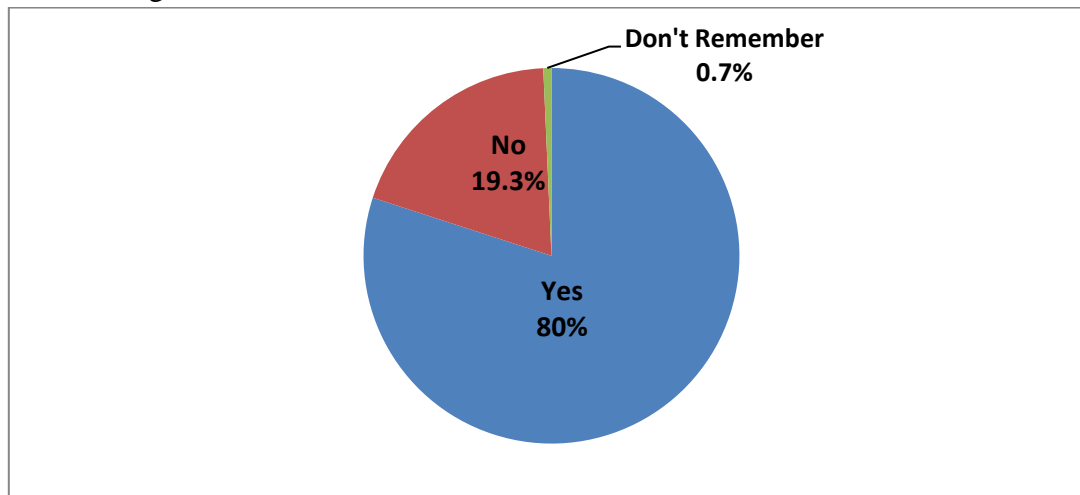


Fig.2: Type of breastfeeding at the time of interview

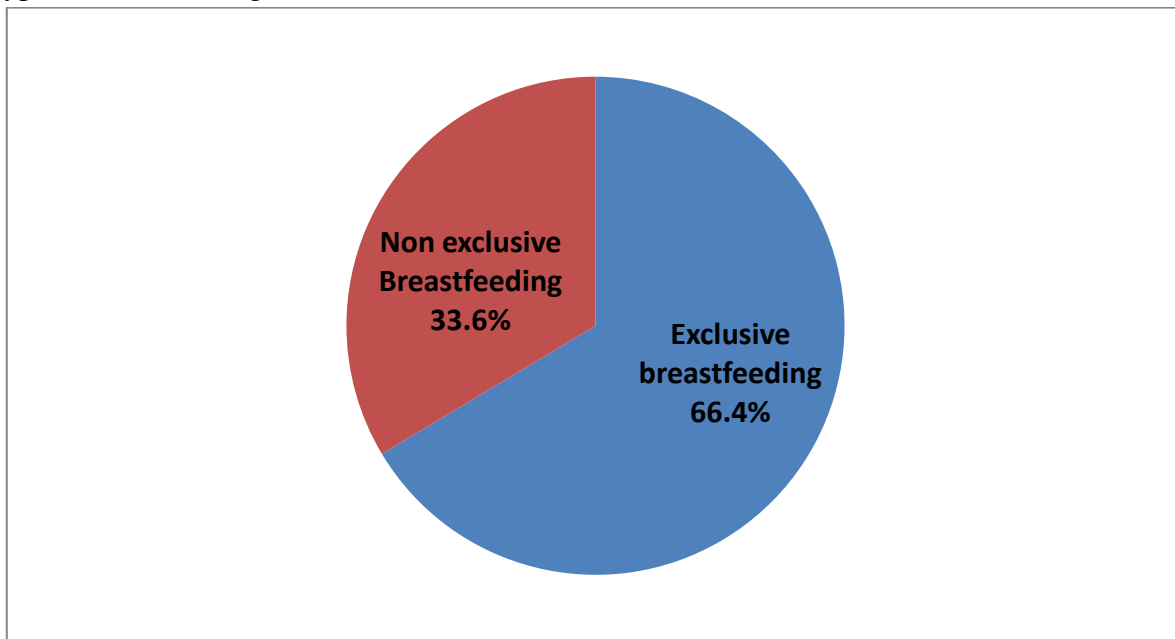
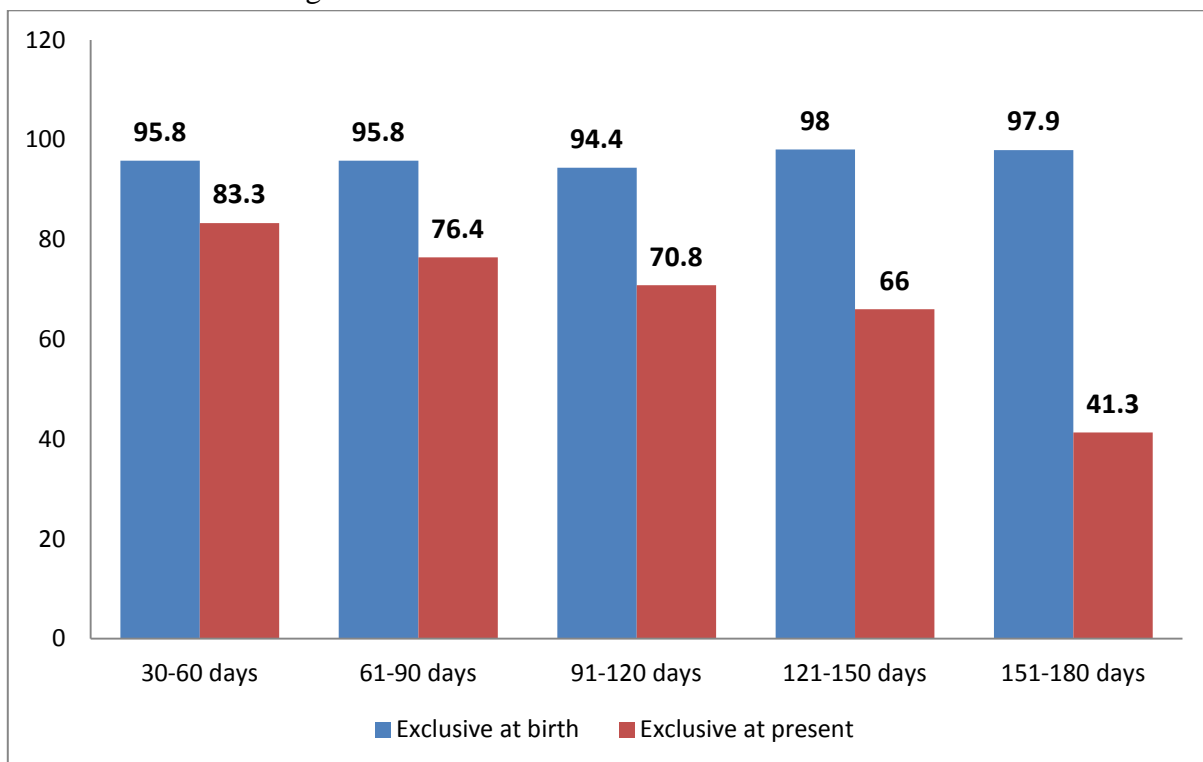


Fig. 3: Exclusive breastfeeding at birth and at the time of interview



Discussion

In the present study, it was found that 100 % of the infants were breastfed after birth. This finding matches with the age old practice, almost universal in Indian societies, of feeding the infant with breast milk after birth. Our study finding is supported by study finding of Acharya R, Meena RR study conducted in rural area of Bikaner in

which it was observed that 98 % of the mothers gave breastfeeding to the infant after birth.⁽¹³⁾ Shaili V et al. in their study in rural area of Dehradun found that 93.6 % of the infants were breastfed after birth⁽¹⁴⁾ According to IYCF (2006) guidelines⁽¹⁵⁾ Government of India recommends that initiation of breastfeeding should begin immediately after

birth, preferably within first one hour. In our study, we found that in 36.9 % of the infants, breastfeeding was initiated within one hour. The study finding is consistent with findings of study conducted in East Delhi in 2012 by Khan AM et al. in which the rate of initiation of breastfeeding within one hour of birth was found to be 37.2 %.

⁽¹⁶⁾ Our study finding is also similar with the national rate of 41.6 percent ⁽¹²⁾ but it is higher than the figure for Delhi NCT which is 28 %. This inappropriate practice of late initiation of breastfeeding may be due to wrong customs and beliefs, poor level of health education in the society, and low level of motivation among mothers and guardians.

Colostrum is also called the “first immunization” for the infant as it helps in developing immunity and provides protection against childhood illness. It is highly recommended that colostrum must be fed to the baby. In our study, it was found that 80 % of the infants were given colostrums. Our study finding is quite similar with the findings of Shaili V et al. study where it was found that colostrums was given to 81.6 % of the infants ⁽¹⁴⁾. The rate found in our study is little lower than that found in Mise PJ et al. study which found this rate to be 88.4 percent ⁽¹⁷⁾. The finding of the present study indicates that practice of giving colostrums to the newborns and not discarding it is very much prevalent in slums of Delhi and 4 out of 5 infants are being given colostrums at present.

Prelacteal feeds should not be given to the infants. In the present study, it was found that 29.9 percent of the infants were given prelacteal feed. The most common prelacteal feed was Ghutti which was given to 36.2% of them. The finding of present study regarding pre-lacteal feeding indicates that this poor practice is still prevalent in slums of Delhi and it may be due to the effect of social belief, family custom and relative’s advice. Another reason may be that the mothers and grandmothers are unaware of harmful effects of pre-lacteal feed.

Exclusive breastfeeding for the first 6 months of life is the most appropriate way of feeding the

infants. In the present study it was found that the rate of exclusive breastfeeding was 66.4 percent at the time of interview. Gender wise, there was not any variation and 66.3 % of the female infants and 66.4 % of the male infants were exclusively breastfed. As per the NFHS-4 data the rate of exclusive breastfeeding in Delhi NCT is 49.8 % and 54.9 % at the national level. ⁽¹²⁾ The finding of present study indicates that the rate of exclusive breastfeeding in slums of Delhi is far from desired level of universal practice of exclusive breastfeeding till 6 months of age, although it is more than the average rate for the country. There are many incidences where mothers start giving water in summer season believing that it is required for their child in addition to breast milk. Sometimes, mothers believe that they are producing less amount of breast milk which is insufficient for satisfying the hunger of the baby. In such situation she starts giving other milk or milk substitute to the baby in addition to breastfeeding. Probably, these wrong beliefs and the lack of timely IPC (Inter-Personal Communication) results into adopting inappropriate practice of nonexclusive breastfeeding instead of exclusive breastfeeding.

In the present study, it was found that at the time of birth the rate of exclusive breastfeeding was 96.5 %. Decreased rates were found when the rates were observed in different age groups. In infants aged 30-60 days the rate was 83.3 % which came down to 76.4 % in 61-90 days age group. It further decreased to 70.8 % in 91-120 days age group. After this the rate still declined gradually in older age groups. It implies that switch from exclusive breastfeeding to non exclusive breastfeeding starts right from the first month and it is gradual over next few months. So, health education regarding breastfeeding should be imparted at the time of delivery and should be reinforced at the time of next contact with the health system, that is, at 1.5 month, 2.5 month and at 3.5 months when infant receives the first, second and the third doses of different vaccines respectively.

In conclusion, it can be said that appropriate infant feeding in general and exclusive breastfeeding in particular is not being practiced optimally by women residing in these slums.

Based on the findings of this study, following recommendations are made to promote optimal breastfeeding practices:

During Antenatal Check-up (ANC) visit, IPC (Inter-Personal Communication) with pregnant mother should also focus on IYCF (Infant and Young Child Feeding) practices and other related issues with regard to initiation of breastfeeding within one hour of birth, no pre-lacteal feed, exclusive breastfeeding till first six months of life and continued breastfeeding thereafter, till 2 years of age or beyond, and no weaning before completion of six month; so that mothers adopt appropriate feeding practices right after delivery. More focus should be given on IEC (Information, Education, and Communication) for husband, grandmothers and other family members. In addition Health education, BCC (Behaviour Change Communication) and SBCC (Social and Behaviour Change Communication) should be used more effectively at the community level, to ensure optimal feeding practices in the community at large.

Limitations of the study and further scope

There may be some recall bias while mothers of relatively older infants were giving information regarding breastfeeding practice at the time of birth. To address this limitation, a longitudinal study would have been more appropriate in which infants would be included at the time of birth and followed-up through first six months of life. This would minimize recall bias and give more sound result regarding breastfeeding practices and exclusive breastfeeding.

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of the data, statistical analysis and preparation of the manuscript. Dr. Renu Shahrawat contributed to the study concept and overall conduct of the study.

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