

Original article

A Study on the Feeding Practices among Under-Five Children in Urban Slum dwellers of District Dehradun, India

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Abstract:

Background: Breast milk feeding is the first fundamental right of the child. However, there are many cultural practices associated with infant feeding of which certain undesirable practices need to be discouraged. **Objectives:** To assess the feeding practices of under five year children in urban slum and to determine the factors influencing it, if any. **Methodology:** Community based analytical cross sectional study was conducted in urban slums amongst mothers over one year period. A house to house survey was conducted and Data was collected using a pre-tested, structured questionnaire on breastfeeding practices & data pertaining to breastfeeding practices was asked in detail from mothers of babies who were breastfed. **Results:** A total of 381 children were studied. A total of 87.0% of the children were delivered at health facilities and the rest at home. 65.9% received prelacteal feed in the form of water, infant milk formula, cow milk and honey. Most of the children (54.1%) received breast milk within 24 hrs of birth. 95.0% received colostrum and 67.2% received exclusive breast feeding for 6 months. It was observed that children who were exclusively breastfed for six months were found to be better nourished (51.3%). **Conclusions:** Majority of the mothers were practicing exclusive breast feeding, however a significant proportion of children was deprived of timely initiation of breast feeding. About 2/3 of the mothers were still practicing pre-lacteal feeds to their children. The study documents that there was significantly increased risk of PEM if the child is not exclusive breastfed for 6 months.

Keywords: EBF; Colostrum; pre lacteal feeds; weaning; under five children; urban slums.

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Introduction

Breast milk feeding is the first fundamental right of the child. The initiation of breast feeding and the timely introduction of adequate, safe and appropriate complementary foods in conjunction with continued breast feeding are of prime importance for the growth, development, health and nutrition of infants and children everywhere. However, there are many cultural practices associated with infant feeding of which certain undesirable practices need to be discouraged. One in every third malnourished children in world lives in India.(1) Optimal breastfeeding of infants under

two years of age has the greatest potential impact on child survival of all preventive interventions, with the potential to prevent over 800,000 deaths (13 per cent of all deaths) in children under five in the developing world(2). Hence, an effort was made to assess the feeding practices of under five year children in urban slum and to determine the factors influencing it, if any.

Materials and methods

This community based analytical cross sectional study was conducted amongst mothers over one year period. The study was carried out for a period of one year i.e. May 2011 till April 2012

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Table 1: Distribution of study population according to Age & Gender

Child age in Months	Distribution of children		Total
	Male	Female	
0 to 6	16(8.6)	17(8.8)	33(8.7)
6 to 12	27(14.4)	25(12.9)	52(13.6)
12 to 36	83(44.4)	102(52.6)	185(48.6)
36 to 60	61(32.6)	55(25.8)	111(29.1)
Total	187(49.1)	194(50.9)	381

(*Figures in parenthesis indicate percentage)

amongst 381 children from 381 mothers in the age group of 0-5 years of age in the Sheesham Jhadi and Chandreshwar Nagar urban slums under the jurisdiction of Urban Health Training Center, field practice area of the Department of Community Medicine, HIMS, Dehradun, India. A house to house survey was conducted and Data was collected using a pre-tested, structured questionnaire on breastfeeding practices & hence data pertaining to breastfeeding practices was asked in detail from mothers of babies who were breastfed. Informed verbal consent was taken from each of the participants. Ethical approval was taken prior study. Factors related to feeding practices were analysed statistically to draw out conclusion. For assessment

Table 2: Distribution of Study Subjects According to Early Feeding Practices

Variable	Distribution of children		Total (N=381)
	Male(n=187)	Female(n=194)	
Pre lacteal feed given			
Yes	124(66.3)	127(65.5)	251(65.9)
No	63(33.7)	67(34.5)	130(34.1)
Colostrum given			
Yes	180(96.3)	182(93.8)	362(95.0)
No	7(3.7)	12(6.2)	19(5.0)
Breast feeding initiation			
Within 1/2 hours	46(24.6)	50(25.8)	96(25.2)
Within 1 hour	94(50.3)	112(57.7)	206(54.1)
First day of birth	31(16.6)	24(12.4)	55(14.4)
After one day of birth	16(8.6)	8(4.1)	24(6.3)
Pacifier used			
Yes	9(4.8)	13(6.7)	22(5.8)
No	178(95.2)	181(93.3)	359(94.2)

(*Figures in parenthesis indicate percentage)

of nutritional status: a child who was either wasted, stunted or underweight or a combination of any of these was considered as Undernourished (< -2 Z score) and a child who was neither wasted, stunted nor underweight as Well nourished ($-2 < Z\text{-score} < +2$). Percentages were calculated for all the variables. Chi square was applied for categorical variables; Fischer Exact Test was applied where sample size was < 30 . Significant level was assumed at $p < 0.05$.

Results

A total of 381 children were studied, out of which forty nine percent were males & fifty one percent were females. It was observed that maximum forty eight and half percent (185/381) children were in the age group of 12- 36 months and least nine percent (33/381) in the age of 0- 6 months (Table 1). Maximum children i.e ninety two percent (351/381) were Hindus, five and half percent (21/381) were Muslims, and rest belonged to other religions. Seventy four and a half percent (284/381) of children were from nuclear families. Thirty four and half percent Mothers (131/381) were illiterate and majority of them, ninety one percent (346/381) were housewives. Fifty nine percent (226/381) of the children belonged to low socioeconomic status.

A total of eighty seven percent (332/381) of the children were delivered at health facilities and the rest at home. Sixty one percent (251/381) received prelacteal feed in the form of water, infant milk formula, cow milk and honey. Most of the children i.e. fifty four percent (206/381) received breast milk within 24 hrs of birth. Ninety five percent (362/381) received colostrum (Table 2) and sixty seven percent (256/381) received exclusive breast feeding for 6 months. In forty six and a half percent (177/381) children breast feeding was continued till 1- 2 years of age and Twenty eight percent (107/381) of children had left breast feeding before six months of age and five percent

Table 3: Distribution of Study Subjects According to Child Feeding Practices

Variable		Distribution of children		Total (N=381)
Exclusive Breast feeding		Male (187)	Female (194)	
Not Practiced		47(25.1)	58(30.0)	105(27.6)
Practiced		131(70.1)	125(64.4)	256(67.2)
BF continuing(< 6month)		9 (4.8)	11(5.6)	20(5.2)
Age till Breast feeding continued				
Less than 6 months	Stopped	56(29.9)	51(26.2)	107(28.1)
	Continued	6(3.2)	14(7.2)	20(5.2)
7 to 12 months		3(16.5)	40(20.6)	71(18.6)
13 to 24 months		9(47.9)	84(43.2)	177(46.5)
More than 24 months		1(0.5)	5(2.5)	6(1.6)
Initiation of Complementary feeding				
Less than 6 months		45(24.1)	64(33.0)	109(28.6)
6 to 9 months		111(59.4)	91(46.9)	202(53.0)
More than 9 months		31(16.6)	39(20.1)	70(18.4)
Variable		Distribution of children		Total (105)
Method of feeding during six months		Male(n=57)	Female(n=48)	
Katori- Chammach		14(7.5)	19(9.8)	33(31.5)
Bottle		21(11.2)	29(14.9)	50(47.6)
Glass		12(6.4)	10(5.2)	22(20.9)

(*Figures in parenthesis indicate percentage)

(20/381) were still continuing breast feeding as they were less than six months of age, in most of them i.e. forty seven and half percent (50/381) were primarily bottle fed. In fifty three percent of the children (202/381) complementary feeding was started after six months of age. (Table 3)

It was observed that children who were exclusively

of the children (67.2%) were exclusively breast fed, while only 27.6% of the mother's do not exclusively breast fed their children (Table 3) which is very high in comparison to 46.0% according to NFHS-3, India (3) & 31.2 % according to NFHS-III, Uttarakhand (4). In comparison to this study

breastfed for six months were found to be better nourished (51.3%) in contrast to those who were exclusively breastfed for more than 6 months i.e. (28.8%). Statistical association was found to be highly significant.

In the above table it was observed that majority of the females (52.6%) who were exclusively breast fed (EBF) for six months were found to well nourished in comparison to 36.7% females who were exclusively breast fed for more than six months. It was also observed that males who were EBF for up to six months i.e. 50.0% were found to be more well nourished in comparison to those EBF for > 12 month (21.8%).

Discussion

In this study majority of the children (67.2%) were exclusively breast fed, while only 27.6% of the mother's do not exclusively breast fed their children (Table 3) which is very high in comparison to 46.0% according to NFHS-3, India (3) & 31.2 % according to NFHS-III, Uttarakhand (4). In comparison to this study

Table 4: Nutritional Status of Study Population According to Duration of Exclusive Breast Feeding Practices in Children

Age in months	Nutritional Status		Total	Z test (P value)
	Wellnourished	Undernourished		
< 6 months	59 (56.2)	46 (43.8)	105(27.6)	p < 0.05
Upto 6 months	78 (51.3)	74 (48.7)	152(39.9)	
> 6 months	30 (28.9)	74 (71.1)	104(27.3)	
**Not Applicable	14 (70.0)	6 (30.0)	20(5.2)	
Total	181(47.5)	200 (52.5)	381	

(*Figures in parenthesis indicate percentage)
 **Age less than 6 month, EBF continued Undernourished $\chi^2=22.6$ df3

another study by Panda et al (1993) at Ludhiana observed a higher number (89 %) of the children were exclusively breast-fed for six months (5). However Bagul A (2012) conducted a study in Nagpur and observed that EBF was practiced in 36.84% children (6). Tiwari R,(2008) at Gwalior observed that very less number of children i.e. only 7.8% actually practiced EBF , 63.8% and 212 i.e. 76.0% newborns were given pre- and post-lacteal feeds with 26.2% discarding colostrum (7).

children were only 18.1% and 80.3% children did not receive timely complementary feeding (9). According to DLHS III it was observed that (52.6%) children in the age of 0-5 months were exclusively breastfed (10).

In this study it was observed that in most of the children (53%) weaning was started after six months of age (Table 3). Findings can be corroborated with NFHS-III, Uttarakhand (2006), according to which, 51.6% children in 6-9 months

Table 5 : Gender wise Nutritional Status of Study Population According to Duration of Exclusive Breast Feeding

Gender	Exclusive Breast Feeding	Nutritional Status		Total	p value
		Well nourished	Under nourished		
Male	< 6 months	19(40.4)	28(59.6)	47(25.1)	0.013
	Upto 6 months	38(50.0)	38(50.0)	76(40.6)	
	> 6 months	12(21.8)	43(78.2)	55(29.4)	
	Not applicable	4(44.4)	5(55.6)	9(4.8)	
	Total	73(39.0)	114(61.0)	187	
Female	< 6 months	40(69.0)	18(31.0)	58(29.9)	0.001
	Upto 6 months	40(52.6)	36(47.4)	76(39.2)	
	> 6 months	18(36.7)	31(63.3)	49(25.3)	
	Not applicable	10(90.9)	1(9.1)	11(5.7)	
	Total	108(55.7)	86(44.3)	194	
Total	< 6 months	59(56.2)	46(43.8)	105(27.6)	0.000
	Upto 6 months	78(51.3)	74(48.7)	152(39.9)	
	> 6 months	30(28.8)	74(71.2)	104(27.3)	
	Not applicable	14(70.0)	6(30.0)	20(5.2)	
	Total	181(47.5)	200(52.5)	381	

(*Figures in parenthesis indicate percentage) Undernourished $\chi^2=10.3$ df3, $p < 0.05$

It was also observed in the present study that only 51.3% children were found to be well nourished who were exclusively breast fed for six months, in comparison to 28.8% children who were exclusively breast fed for more than six months (Table 4).

Anderson et al (2010) at Ghana observed in his study that children who were exclusively breastfed for the first 6 months after birth had lower prevalence rates of stunting than those either mixed fed or formula fed for the same period (8). In present study it was also observed that males (61.0%) were found to be more undernourished in comparison to females (44.3%).

Another observer Tamoghna B (2011) at Kolkata found that the proportion of exclusively breast fed

of age had started receiving semisolid food apart from breast milk (4). Similarly, according to NFHS-III (2006) India, fifty three percent of the children were given complementary feeding (breast milk and complementary food) at the age of 6-8months i.e. > 6 months (3). The proportion of children was further higher according to DLHS-III, Uttarakhand (2007-08), in which, sixty four percent children in 6-9 months of age had started receiving semisolid food apart from breast milk (10).

Conclusion

Regarding feeding practices in study area, majority of the children were given colostrum and timely breast feeding was initiated. However a significant proportion (one fifth) of children was deprived of

timely initiation of breast feeding. About two third of the mothers were still practicing prelacteal feeds to their children. Majority of the mothers were practicing exclusive breast feeding.

The study documents that there was significantly increased risk of PEM if the child is not exclusive breastfed for 6 months and if there was delayed introduction of complementary feeding. Messages should be effectively communicated with the

message that exclusive breast-feeding up to six months and gradual introduction of semisolids from six months are critical for the prevention of under nutrition in infancy.

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Conflict of Interest: Nil.

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