



## Infant and Young Child Feeding Practices in an Urban Slum in Mumbai

### KEYWORDS

Under 3 children, Exclusive Breast feeding, infant and young child feeding

### Dr. Agrawal Nisha

Assistant Professor, Department of Community Medicine, Indira Gandhi Government Medical College, Nagpur

### Dr. Acharya Shrikala

Associate Professor, Department of Community Medicine, Seth GSMC and KEM Hospital, Mumbai

### ABSTRACT

*Introduction: Adequate nutrition during infancy and early childhood is essential to ensure the growth and development of children. Poor infant feeding practices are widespread worldwide, worse in urban areas in Maharashtra.*

*Objectives: To study the infant and young child feeding practices in mothers of children under-3 years of age in an urban slum area.*

*Materials and Methods: A cross sectional observational study was conducted among 470 children under-3 years of age, selected by simple random sampling from the enrollement registers maintained in anganwadis of an urban slum in Mumbai. Mothers of these children were interviewed by using a semi-structured questionnaire.*

*Results: 61.3% of children were breast fed within 1 hour of birth, while 8.1% were breast fed after 24 hours of birth. 91.1% children were given colostrums, while 14% were given prelacteals. 34.3% mothers exclusively breast fed their children for 6-9 months, followed by 24.3% Mothers for 3-6 months.*

### Introduction:

Adequate nutrition during infancy and early childhood is essential to ensure the growth, health, and development of children to their full potential. Poor nutrition increases the risk of illness, and is responsible, directly or indirectly, for one third of the estimated 9.5 million deaths that occurred in 2006 in children less than 5 years of age.<sup>(1,2)</sup> Over 2/3<sup>rd</sup> of these deaths are often associated with inappropriate feeding practices and occur during the first year of life.<sup>(3)</sup>

It is well recognized that the period from birth to two years of age is the "critical window" for the promotion of good growth, health, and behavioral and cognitive development. Therefore, optimal infant and young child feeding is crucial during this period. Optimal infant and young child feeding means that mothers are empowered to initiate breastfeeding within one hour of birth, breastfeed exclusively for the first six months and continue to breastfeed for two years or more, together with nutritionally adequate, safe, age appropriate, responsive complementary feeding starting at six months.<sup>(4)</sup>

Poor breastfeeding and complementary feeding practices are widespread. Worldwide, it is estimated that only 34.8% of infants are exclusively breastfed for the first 6 months of life, the majority receiving some other food or fluid in the early months.<sup>(5)</sup> Complementary foods are often introduced too early or too late and are often nutritionally inadequate and unsafe.

In Maharashtra, only 51.8% children under-3 years of age were breast fed within one hour of birth. Also, the median exclusive breastfeeding was only 2.6 months in Maharashtra. The situation was worse in urban areas having median exclusive breastfeeding for 1.7 months.<sup>(6)</sup>

Hence, the present study is conducted in children under-3 years of age in an urban slum area focussing on the various infant and young child feeding practices followed by their mothers.

### Materials and Methods

Institutional Ethics Committee approval was taken for the study.

The Cross-sectional Observational study was conducted among children under-3 years of age residing in an urban slum. This slum is in the catchment area of Urban Health and Training Centre of KEM hospital & Medical College, Mumbai. Anganwadi centres under ICDS programme are also established in this slum area.

The sample size was 470, depending on the prevalence of underweight in children under-3 years age in India (46%) and allowable error 10% of prevalence. A list of children under-3 years was drawn from the enrolled population survey register maintained at all the anganwadis in the area. The children for the present study were uniformly selected from all the anganwadis in the catchment area. From each anganwadi centre, 8 children were randomly selected by using random number table from the list.

Mothers of these children were visited in their houses and after taking informed consent they were interviewed using a pre-tested semi-structured questionnaire, which included demographic information and feeding practices followed by their mothers. If any house was locked or if child's mother did not consent/was not available in the house, then that house was skipped and the next child from the list was included in the study.

### Results:

35.1% children in the present study were infants, 36.6% in 1-2 years age and 28.3% belonged to 2-3 years of age. There was male preponderance (57.9%) in all the age groups. Majority children (73.8%) were of first and second order children in the families. 26.2% children were of higher birth order of 3 and more. 17.2% children were low birth weight babies having birth weight less than 2.5 kg. 80.7% children had their birth weight between 2.5-3.5 kg while only 2.1% of children had birth weight more than 3.5 kg.

61.3% of children were breast fed within 1 hour of birth. 18.1% children were initiated on breast feeding between 1-4 hrs of birth. 11.4% were breast fed for the first time between 4 hours to 1 day, while 8.1% were breast fed after 24 hours of birth. 86% of children were not given any prelacteal feed and 14% were given prelacteals. Among those who were given prelacteals, most common prelacteals were Cow's milk, Hon-

ey and Lactogen powder. Janamghuti, sugar water and water were the other less common prelacteal feeds.

Most of the children (91.1%) were given colostrum. The most common reason for not feeding colostrums was advice by the elders in the family (76.2%).

As seen in Table 1, 34.3% Mothers exclusively breast fed their children for 6-9 months, followed by 24.3% Mothers for 3-6 months. 27% mothers gave water and other liquids in addition to breast milk before 3 months of age. 14.2% Mothers were still giving exclusive breast feed. The pattern of duration of exclusive breast feeding was similar for both sexes.

When period of exclusive breast feeding was computed against current age of the child, it was seen that majority (67) of children still being exclusively breastfed were less than 6 months of age. Amongst children of age 6-12 months, majority of the children had received exclusive breast feeding for a period of 6-9 months.

Table 2 shows that most of the children (49.6%) were started complementary feed between 6-9 months of their age. A relatively high percentage of children (22.8%) were started complementary feeds between 3-6 months of age. 14.9% children were less than 6 months of age and were not started on complementary feeding. Most common liquid Complementary food was Dal water, Rice water (35.5%) followed by Cow's Milk (24%). The Semisolid complementary food preferred by Mothers was Cerelac (12.8%), Khichdi (6.4%) and Cereal Gruel (6.1%). Biscuits (9.7%) and Bread were the other complementary foods.

According to Table 3, among the 323 children who were of age 12 months and above, 39.6% of children were already on full diet by 9-12 months of age. 31% children were given full diet at 12-15 months of age. 12.7% children were more than 12 months of age but were not initiated on full diet.

Table 3 also reveals that 5.9% mothers stopped breast feeding their children before completion of 6 months of age, followed by 7.1% who stopped breast feeding between 6-12 months. 64.5% mothers were still breastfeeding their children.

Most of the Mothers (43.4%) said that they themselves decided about Colostrum, duration of breast feeding and various complimentary feeds for their children on their own. 42.3% were advised by Doctor regarding the Infant feeding practices. 12.2% Mothers followed the advice of their Family members. A very small number of Mothers identified Nurse and none identified Anganwadi worker as the source of information.

28.3% children were bottle fed, while most of the children (71.7%) were not given bottle feeding.

Most of the mothers (92.1%) continued breast feeding even during illness of the child or/and mother. 11.9% of mothers had some problems in breast feeding their children.

#### Discussion:

The present study describes the health and nutritional status of children under 3 years of age in an urban slum in mumbai.

17.2% children in the present study were low birth weight babies which is similar to NFHS-3 (2005-2006) findings, which reports 22% babies born in India having low birth weight. <sup>(7)</sup>

In the present study, more (61.3%) children were initiated on breast feeding within 1 hour of birth as compared to NFHS-3 (2005-2006) findings, which reports that 52% of children under-5 years of age are started on breast feeding within 1 hr of birth in Maharashtra, while 78.4% children are initiated on breast milk within 1 day of birth. <sup>(7)</sup>

Most common prelacteals in the study were Cows milk, Honey and Lactogen powder. Janam ghutti, sugar water and water were the other less common prelacteal feeds. NFHS-3 mentions milk other than breast milk as the most common prelacteal feed. Honey, sugar or glucose water, and plain water are among the other common prelacteals. <sup>(7)</sup>

Most of the children (91.1%) in the present study were fed colostrum. Roy S et al. <sup>(8)</sup> also found that 90% (108/120) children in an urban slum were fed with colostrums.

In the present study, Exclusive breast feeding for 6-9 months was given by 34.3% Mothers, while 24.3% fed for 3-6 months. 49.6% children were started complementary feed between 6-9 months of their age. The most common liquid Complementary food was Dal water, Rice water (35.5%) followed by Cows Milk (24%). The Semisolid complementary food prepared from grains constituted 25.1%. Similar findings were reported by NFHS-3 with 28% children exclusively breastfed till the age of 4-5 months and 53% children started on complementary feeding by the age of 6-8 months. The most common liquid complementary feeds are liquids other than milk and water (45.2%) and other Milk (38.5%). 63.1% of the solid or semi-solid foods were constituted by food made from grains. <sup>(7)</sup>

42.3% mothers in the present study mentioned that they were advised by Doctor regarding the Infant feeding practices. 12.2% Mothers followed the advice of their Family members. Roy S et al. <sup>(8)</sup> also found that mostly the mothers were informed about Infant feeding practices from health facility, guardian and peer groups.

**Table 1: Distribution of Children according to Duration of Exclusive Breast Feeding**

Period of Exclusive BF	Male (N=272)	Female (N=198)	Total (N=470)
Not Breastfed exclusively	30 (11)	22 (11.1)	52 (11.1)
Less than 3 months	47 (17.3)	28 (14.1)	75 (15.9)
3 - 6 months	64 (23.5)	50 (25.3)	114 (24.3)
6 - 9 months	93 (34.2)	68 (34.4)	161 (34.3)
9 months and more	0	1 (0.5)	1 (0.2)
Still Breast-feeding	38 (14)	29 (14.6)	67 (14.2)
Grand Total	272 (100)	198 (100)	470 (100)

**Table 2: Distribution of Children as per age of starting complementary feeds and common weaning foods among them**

Age of starting complementary feed	Male	Female	Total	Liquid feed	Semi Solid feed	Solid feed	Total
At Birth	7 (2.6)	8 (4)	15 (3.2)	12	3	0	15 (3.8)
Less than 3 months	11 (4)	6 (3)	17 (3.6)	13	4	0	17 (4.3)
3 - 6 months	67 (4.6)	40 (20.3)	107 (22.8)	69	25	13	107 (27.3)
6 - 9 months	134 (49.3)	99 (50)	233 (49.6)	137	74	22	233 (59.5)

9 - 12 months	4 (1.5)	5 (2.5)	9 (1.9)	6	2	1	9 (2.3)
1 year and more	8 (2.9)	3 (1.5)	11 (2.3)	6	2	3	11 (2.8)
Not Started *	3 (1.1)	5 (2.5)	8 (1.7)				
Not applicable **	38 (14)	32 (16.2)	70 (14.9)				
Grand Total	272 (100)	198 (100)	470 (100)	243	110	39	392 (100)

\*Children who are eligible but not started on complementary feeds

\*\*Children who are not eligible for starting complementary feeds

**Table 3: Distribution of Children according to the Age at Full Diet and age of stopping breast feeding**

Age at Full Diet	Male (N=180)	Female (N=143)	Total (N=323)
9 - 12 months	74 (41.1)	54 (37.8)	128 (39.6)
12 - 15 months	58 (32.2)	42 (29.4)	100 (31)
15 - 18 months	5 (2.8)	5 (3.5)	10 (3.1)
18 - 24 months	18 (10)	15 (10.4)	33 (10.2)
24 months & more	6 (3.3)	5 (3.5)	11 (3.4)
Not started	19 (10.6)	22 (15.4)	41 (12.7)
Grand Total	180 (100)	143 (100)	323 (100)
Age of stopping Breast feeding	Male (N=272)	Female (N=198)	Total (N=470)
Less than 6 months	15 (5.5)	13 (6.6)	28 (5.9)
6 - 12 months	19 (7)	14 (7.1)	33 (7.1)
12 - 18 months	15 (5.5)	20 (10.1)	35 (7.4)
18 - 24 months	22 (8.1)	19 (9.6)	41 (8.7)
24 - 30 months	11 (4.1)	8 (4)	19 (4.1)
30 - 36 months	8 (2.9)	3 (1.5)	11 (2.3)
Not yet stopped	182 (66.9)	121 (61.1)	303 (64.5)
Grand Total	272 (100)	198 (100)	470 (100)

## REFERENCE

World Health Organization. The global burden of disease: 2004 update. Geneva: World Health Organization; 2008. | Black RE, et al. Maternal and child undernutrition: global and regional exposures and health consequences. *Lancet*. 2008;371:243-60. | National guidelines on infant and young child feeding, 2004 | [http://www.unicef.org/nutrition/index\\_breastfeeding.html](http://www.unicef.org/nutrition/index_breastfeeding.html) | WHO Global Data Bank on Infant and Young Child Feeding. 2009. | International Institute for Population Sciences (IIPS) and Macro International. National Family Health Survey (NFHS-3), 2005-06: India: Volume I. Mumbai, India: IIPS, 2007. | National Family Health Survey (NFHS-3), Vol.1, Chapter 9, Child Health, pg. 253-257. | Sima Roy, Aparajita Dasgupta, Bobby Pal. "Feeding practices of children in an urban slum of Kolkata". *Indian Journal of Community Medicine*, 2009; 34(4): 362-363.