

## Status of Infant and Young Child Feeding Practices With Special Emphasis on Breast Feeding in an Urban Area of Meerut

Perna Singhal, S.K.Garg, H.Chopra, Seema Jain, S.K.Bajpai, Arun Kumar

Department of Community Medicine, L.L.R.M. Medical College, Meerut

---

**Abstract:** Infant feeding practices comprising of both the breastfeeding as well as complementary feeding have major role in determining the nutritional status of the child. 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. The first two year of life provide a critical window of opportunity for ensuring children's appropriate growth and development through optimal feeding. Optimal breast feeding could prevent 13% of deaths occurring in children less than 5 year of age globally, while appropriate complementary feeding practice would results in an additional 6% reduction in under-five mortality.

**Objective-** To study infant and young child feeding practices with special reference to breast feeding in children between 6- 36 month of age.

**Materials And Methods-** This cross sectional study was carried out in an urban population of Meerut city, in children between 6 to 36 months of age. Assuming the prevalence of breast feeding to be 50% the sample size was taken as 400 children. Information regarding child rearing practices was collected by interviewing mother by house to house visit on pre-designed and pre-tested Performa. Data was analysed and statistically evaluated.

**Results-** The study showed that 15.0% mothers started breastfeeding within 1 hr of birth, 29.8% started complementary feeding at 6 month, while 5.3% exclusively breastfed for six month duration. 79.6% were given food from four or more group. Minimum meal frequency was adequate in 43.4% while minimum acceptable diet was 37.7%.

**Conclusion-** Present study revealed very poor infant and young child feeding practices in urban area of Meerut.

**Key Words:** IYCF, Breast feeding

---

### I. Introduction

Infant and young child nutrition has been engaging the attention since long for the very simple reason that growth rate in the life of human being is maximum during the first year of life. Infant feeding practices comprising of both the breastfeeding as well as complementary feeding have major role in determining the nutritional status of the child.<sup>1</sup>

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 & it is responsible, directly or indirectly, for one third of deaths that occur in children less than 5 year of age<sup>2</sup>. The first two year of life provide a critical window of opportunity for ensuring children's appropriate growth and development through optimal feeding. Optimal breast feeding could prevent 13% of deaths occurring in children less than 5 year of age globally.<sup>2</sup>

Worldwide, more than 9 million children under 5 year of age die each year. Malnutrition underlies a majority of these under five deaths, 70% of which occur in the first year of life. Infant and young child feeding practices directly impact the nutritional status and, ultimately the child survival of children less than 2 year of age.<sup>3</sup>

Breastfeeding is not only important for young child survival, health, nutrition, the development of the baby's trust and sense of security but it also enhances brain development and learning readiness as well. A breastfed baby is likely to have an IQ of around 8 points higher than a non-breastfed baby. The link between malnutrition and infant feeding has been well established. Recent scientific evidence reveals that malnutrition has been responsible, directly or indirectly, for 60% of all deaths among children less than five years of age annually. Over 2/3 of these deaths are often associated with inappropriate feeding practices and occur during the first year of life. Only 35% of infant world-wide are exclusively breastfed during the first four months of life.<sup>1</sup>

### II. Objective

To study the infant and young child feeding practices with special emphasis on breast feeding in children between 6- 36 month of age.

### III. Material And Methods

#### Sample of study:

This cross sectional study was conducted in the population registered at the urban health centre SurajKund, which is a field practice area of Department of Community Medicine, LLRM Medical College of Meerut. The localities covered by UHTC, were Old and New Arya Nagar, Old and New Hanuman-Puri, Old and New Bansipura, Lakshmi Nagar, Saraswati Mandir, Devi Nagar, Ram Bagh and Gandhi Nagar.

#### Sample Size:

For calculating the sample size the prevalence of breast feeding was taken to be 50% with confidence level of 95% and a relative precision of 10%, an optimum sample for study was obtained. The minimum sample size came out to be 384.

#### Period of Study:

The data for this study was collected from February 2012 to July 2012.

### IV. Methods

A house to house survey was done to cover the entire area, and a total of 400 children (6 months to 36 months of age) were covered. The mothers of all 400 children were cooperative, so all 400 cases were studied & analyzed. Detailed information regarding child rearing practices with especial emphasis on pattern of breast feeding and Quality of breast feeding was also collected by interviewing mother/foster mother.

The data thus collected, was first coded & then transferred to a master chart on Microsoft Excel, from which simple as well as co-relation tables were prepared, analysed & statistically evaluated.

### V. Results

The baseline characteristics of the children studied in Surajkund urban slums area of Meerut, shows that the maximum of children belonged to age group 24 to 35 month (50.0%). 58.0% children of the study population were male and 42.0% were female, with a male to female ratio of 1.3.

As shown in table 1 the core indicator of IYCF revealed very low IYCF practices. In all only 15.0% mothers started breastfeeding within 1 hr. of birth, **while more than one third (38.3%) stated to give exclusive breast feeding up to six month of age but with pre-lacteal feeds. Only 21 (5.3%) were exclusively breastfed for 6 months without pre lacteal feeds.** The core indicator revealed that in all only 29.8% started complementary feeding at 6 months.

Among 7 food group used to find out minimum dietary diversity, two third of children (79.6%) were given food from four or more group while 20.4% less than four number of food group. Minimum meal frequency was adequate in 43.4% while minimum acceptable diet was 37.7%. (Table-1)

Regarding optional indicator of IYCF, in all majority (94.5%) mothers stated to have ever breastfed their child, while 5% mothers never breast fed their child. Among children of 24 to 35 months of age, the duration of breastfeeding for 2 year was 40.5% and predominant breastfeeding was 4.0%. Majority (65.8%) of mother used bottle to feed their child. (Table-2)

The present study revealed the most common reason for late initiation of breast feeding was social custom and belief (52.8%). Other reasons were mother and baby illness (41.2%), breast milk insufficiency (4.4%) and difficulty of infant to attach to breast (1.6%).

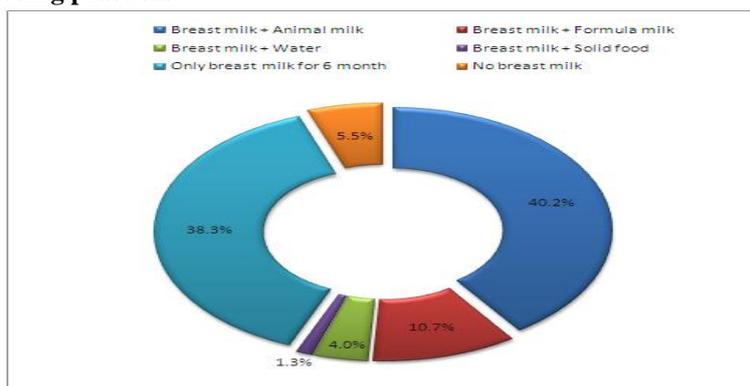
Regarding breast feeding practices the most common, among mothers (40.2%) was combination of breast milk and animal milk (cow/buffalo) followed by only breast milk with pre lacteal feeds for first 6 months (38.3%) as shown in table no-3. While other practices being Breast milk and formula milk (10.7%), breast milk and water (4.0%) and breast milk and solid food (1.3%) to feed their child. In all 5.5% of mothers did not use breast milk at all to feed their child. (Figure-1)

Majority of mother (96.0%) were laying their baby by their side always while 4.0% mothers were not practicing rooming in. Almost all mothers (90.5%) fed their baby on demand and 76.7% of mothers feed their child more than 8 times while 23.3% feed less than 8 times in 24 hrs. (Table-4)

Two third of mothers (78.0%) were aware about the duration of exclusive breast feeding up to 6 months of age, where as almost half (44.5%) of mothers knew that, even water is not to be given for 6 months. Very few (8.3%) were aware that anything should not to be given before starting breast feeding, as prelacteal feed.

About two third of mother (69.5%) were aware of advantage of breastfeeding. About (63.0%) were aware that breast milk is easily digested followed by gives protection against infection (61.5%), as a perfect nutrition to new-born (54.0%), help in bonding to mother (12.0%), help in delaying new pregnancy (5.5%) and protect mother health (2.0%).

Figure-1: Breast feeding practices



## VI. Discussion

In all, only 15.0% mothers started breastfeeding within 1 hr of birth in present study, this finding is consistent with 13.6% as study by Sinhababu et al (2010)<sup>4</sup>, quiet lower then 25.0%, 42.2%, 61.6%, 36.6% and 38.1% as reported by NFHS-3 (2005-06)<sup>5</sup>, CATA report (2005)<sup>6</sup>, Dongre et al (2010)<sup>7</sup>, Gupta et al (2010)<sup>8</sup> and Ravall et al (2011)<sup>9</sup> respectively and quite higher than 6.3% according to Kumar et al (2006)<sup>10</sup>.

In present study, among 400 mothers, 42 did not give any prelacteal feed. Out of which only 21 (5.3%) exclusively breastfed for 6 months, While among those who gave prelacteal feed (358) only 38.3% exclusively breastfed for six month duration which is comparable to finding by the NFHS-3 (2005-06)<sup>5</sup>, fact sheet of Uttar Pradesh<sup>11</sup> less than half 31.8% respectively. Finding of exclusive breast feeding reported by Kishor et al<sup>12</sup>, Muchina & Waithaka<sup>13</sup> and Sinhababu et al<sup>4</sup> was less 10.0%, 12.6% and 57.1% respectively.

Food groups which is similar to finding of studies done in (2005-06)<sup>5</sup> in Sikkim and Kerala being 70.6% and 73.9% respectively, while Uttar Pradesh, NFHS-3 finding showed lower use of 4 food groups (35.4%).

In present study majority (94.5%) of mothers stated of ever breastfeeding their child. Similar finding was reported by Rasanias et al<sup>14</sup>, NFHS-3 (2005-06)<sup>5</sup> and Muchina & Waithaka (2010)<sup>13</sup> as 92.4%, 96.0% and 99.0% respectively.

In present study, among children of 24 to 36 months of age, the duration of breastfeeding for 2 yr was 40.5% higher as compared to 32% in Kenya observed by Esmail et al (1994)<sup>15</sup>. Predominant breastfeeding was 4.0% in present study which is quite higher, (33.0%) as reported by Taneja et al (2003)<sup>16</sup>.

In present study, majority (65.8%) of mothers used bottle to feed their child which was consistent with 65.8% as reported by Rasanias et al<sup>14</sup> in Delhi and higher than 7.4%, 10.2% as reported by Kulkarni et al<sup>17</sup>, Sinhababu et al<sup>4</sup> and NFHS-3<sup>5</sup> reported 9.3%, 22.4% and 2% in Uttar Pradesh, Goa, and Assam respectively.

In present study, among those (79.5%) who initiated breast feeding late, the most common reason was social custom and belief (52.8%). Other reasons were mother and baby illness (41.2%), breast milk insufficiency (4.4%) and difficulty of infant to attach to breast (1.6%). This finding was also supported by Kumar et al (2006)<sup>10</sup> who reported that, common beliefs to delay breastfeeding were Family restrictions (38.8%), followed by social customs and religious beliefs prevalent in the community (25.2%) while Muchina & Waithaka (2010)<sup>13</sup> reported that, the main reasons for failure to breast feed within one hour, were insufficient milk production (28.5%), inability of the infant to suck at the breast (18.6%) and maternal exhaustion similarly according to Patel A et al (2011)<sup>18</sup>, factors delaying timely initiation were obstetric problems and caesarean deliveries.

Almost 40.2% of mothers practice breast milk and animal milk (cow/buffalo) followed by only breast milk for first 6 months (38.3%), breast milk and formula milk (10.7%), breast milk and water (4.0%) and breast milk and solid food (1.3%) to feed their child. 5.5% of mothers did not use breast milk at all to feed their child. According to NFHS-3 report (2005-06)<sup>19</sup>, almost 46% mothers exclusively breastfed their child, followed by breast milk and water (22.0%), breast milk and solid food (10%), breast milk and other milk (15%), breast milk and non milk liquid (5%) and 2.0% of mothers did not use breast milk at all to feed their child.

In present study, majority of mother (96.0%) were laying their baby by their side always which is higher than 84.0% as reported by Madhu et al (2009)<sup>20</sup> in Karnataka. Almost all mothers (90.5%) fed their baby on demand in present study while according to Muchina & Waithaka (2010)<sup>13</sup>, Madhu et al (2009)<sup>20</sup> and Rasanias et al (2003)<sup>14</sup>, 90.6%, 84% and 64.3% of the mothers practiced breastfeeding on demand respectively.

In the present study, 76.7% of mothers fed their child more than 8 times in 24 hrs. while Rasanias et al (2003)<sup>14</sup> reported that frequency of breast-feeding was 5-8 times per day among 45.6% and according to NFHS-

3 (2005-2006)<sup>5</sup>, at least 89% of children under age six months were breastfed six or more times in the day and night.

In the present study, 78.0% of mothers were aware about the duration of exclusive breast feeding up to 6 months, of age as compared to 83.3% in south Nigeria, 39% in Panchkula District of Haryana and 38% in South India by Utoo et al (2012)<sup>21</sup>, Kishor et al (2009)<sup>12</sup>, and Maheswari et al (2010)<sup>22</sup> respectively.

In present study, about two third of mothers (69.5%) were aware of advantage of breastfeeding. About 63.0% mothers were aware that breast milk is easily digested, followed by gives protection against infection (61.5%), as a perfect nutrition to newborn (54.0%), help in bonding to mother (12.0%), help in delaying new pregnancy (5.5%) and protect mother health (2.0%) while according to Utoo et al (2012)<sup>21</sup> in south Nigeria, one third of the respondents did not know more than 2 components of breast milk and 75.1% did not know greater than 3 advantages of breastfeeding.

## VII. Conclusion And Recommendation

The present study revealed very poor infant and young child feeding practices in urban area of Meerut as shown in figure -1. The present study shows improper infant and young child feeding practices in reference to breast feeding in urban slums of Meerut. The present study recommends for reducing Infant mortality and better children for tomorrow, all hospitals and health centers, maternity centers should advocate proper education about IYCF guideline that is timely initiation of breast feeding within 1 hr, promoting exclusive breastfeeding for the first six months. Introduction of complementary foods thereafter with continued breastfeeding up to the age of two years and beyond.

In communities by the help of Govt Health care delivery system self help group should be designed to motivate mothers for following the IYCF practices & various IEC activities should also include a detailed teaching about breast feeding practice because most of mother they hesitate about to follow the proper Breast feeding practices result into non exclusive breast feeding practices.

## Bibliography

- [1]. Govt. of India (2006); National guidelines on Infant and Young Child Feeding (Ministry of Human Resource development, New Delhi; Department of Women and Child development); 9-10.
- [2]. WHO (2009): Session-1; Infant and young child feeding model chapter for text books.
- [3]. WHO (2003); Implementing the global strategy for infant & young child feeding. Geneva, 3-5 Feb.
- [4]. Sinhababu A, Mukhopadhyay D K, Panja T K, Saren A B, Mandal N K and Biswas A B: Infant-and Young Child-feeding Practices in Bankura District, West Bengal, Ind. Jour Health Pop. Nut. 28(3), 2010:294-299.
- [5]. IIPS (2007):NFHS-3 (2005-2006); Vol. 1 Chapter 10 nutrition and anaemia Govt. of India.
- [6]. Concurrent assessment of health and family welfare programs and technical support to districts of Uttar Pradesh, Meerut, table 4B.4.2006-2007;117,187,189,138,144.
- [7]. Dongre A R, Deshmukh P R, Rawool A P and Garg B S; where and how breastfeeding promotion initiatives should focus its attention? A study from rural Wardha; Ind. Jour Comm. Med. 35(2), 2010:226-229.
- [8]. Gupta P, Srivastava V K, Kumar V, Jain S, Masood J, Ahmad N and Srivastava J P; Newborn care practices in urban slums of Lucknow city, UP; Ind. Jour Comm. Med. 35(1),2010:82-85. (<http://www.ijcm.org.in/article.asp?issn=09700218;year=2010;volume=35;issue=1;spage=82;epage=85;aulast=Gupta>) Accessed on 05/07/2012
- [9]. Ravall D, Jankar D V and Singh M P: A study of breast feeding practices among infants living in slums of Bhavnagar city, Gujarat, India; health line, 2 (2), 2011:78-83.
- [10]. Kumar D, Agarwal N and Swami H M; Socio-demographic correlates of Breast-feeding in urban slums of Chandigarh; Ind. Jour Med. Sci. 60, 2006:461-6.
- [11]. Govt. of India (2008): NFHS-3 (2005-2006), Fact sheet of Uttar Pradesh. IIPS Mumbai.
- [12]. Sai M, Kishore S, Kumar P and Aggarwal A K; Breastfeeding Knowledge and Practices amongst Mothers in a Rural Population of North India: A Community-based Study; Jour of Tropical Pedi. 55(3P),2009:183-188.
- [13]. Muchina E N and Waithaka P M: Relationship between breastfeeding practices and nutritional status of children aged 0-24 months in Nairobi, Kenya; African Jour of Food, Agriculture, Nutrition and Development 10(4), 2010:2358-2378.
- [14]. Rasanía K, Singh S K, Pathi S, Bhalla S and Sachdev T R; Breast-feeding Practices in a Maternal and Child Health Centre in Delhi; Health and Population-Perspectives and Issues. 26(3), 2003:110-115.
- [15]. Esmai and Songa, J.: Health education on breastfeeding in ANC in Edoret district hospital, Kenya. 71, 1994: 149-154. European journal of scientific research.
- [16]. Taneja D K, Saha R, Dabas P, Gautam V P, Tripathy Y and Mehra M: A Study of Infant Feeding Practices and the Underlying Factors in a Rural Area; Ind. Jour Com. Med. 28(3), 2003:7-9.
- [17]. Kulkarni R N, Anjenaya S and Gujar R; Breast Feeding Practices in an Urban Community of Kalamboli, Navi Mumbai; Ind. Jour Com. Med. 29(4),2004.
- [18]. Patel A, Banerjee A, Kaletwad A; Timely Initiation of Breastfeeding and Pre-Lactal Feeding Rates in Hospital Delivered Babies in India and Associated Factors; Pedi. Res 70(52), 2011: 277.
- [19]. Govt. of India (2009): NFHS-3 (2005-2006); Nutrition in India. IIPS Mumbai.
- [20]. Madhu K, Chowdary S and Masthi R; Breast feeding practices and newborn care in rural areas: A descriptive cross-sectional study. Ind. Jour Com. Med. 34(3), 2009:243-246.
- [21]. Utoo B T, Ochejele S, Obulu M A and Utoo P M; Breastfeeding Knowledge and Attitudes amongst Health Workers in a Health Care Facility in South Nigeria: the Need for Middle Level Health Manpower Development; Clinics in Mother and Child Health (Article ID 235565) 9, 2012:5.
- [22]. Maheswari E, Bhat B V and Ahamed M A P; Knowledge, attitude and practice of breastfeeding among postnatal mothers; Current. Pedi. Res.14(2), 2009:119-124.

**Table 1-  
Core Indicators of infant and young child feeding**

S. No.	Core Indicator	n	No.	%
1	Early initiation of breastfeeding	400	60	15.0
2	Exclusive breastfeeding of 6 month with prelacteal feed	400	153	38.3
3	Exclusive breastfeeding without prelacteal feed	400	21	5.3
4	Complementary feeding at 6 month	400	119	29.8
5	Minimum dietary diversity	392	312	79.6
6	Minimum meal frequency	392	170	43.4
7	Minimum acceptable diet	392	148	37.7

**Table 2-  
Optional Indicators of infant and young child feeding**

S. No.	Optional Indicator	N	No.	Percentage
1	Child ever breastfed	400	378	94.5
2	Continued breastfeeding at 2 year	200	81	40.5
3	Bottle feeding	400	263	65.8
4	Predominant breastfeeding	400	16	4.0

**Table 3-Breastfeeding practices of children:**

Pattern of breastfeeding	Number	Percentage
Breast milk + Animal milk	161	40.2
Breast milk + Formula milk	43	10.7
Breast milk + Water	16	4.0
Breast milk + Solid food	05	1.3
Only breast milk for 6 month	153	38.3
No breast milk	22	5.5
<b>Total</b>	<b>400</b>	<b>100.0</b>

**Table 4-Quality of Breastfeeding**

Quality Of Breastfeeding	Number(N=400)	Percentage
Rooming In	384	96.0
On Demand Breast Feeding	362	90.5
>8 Times Breast Feeding	307	76.7