

Infant and Young Child Feeding Practices with Special Reference to Complementary Feeding In an Urban Area of Meerut

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Abstract:

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 and infant feeding practices comprising of both the breastfeeding as well as complementary feeding have major role in determining the nutritional status of the child. 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.

Material And Method: 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 predesigned and pretested 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 38.3% 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-The study revealed a poor Infant and Young Child Feeding Practices that need to be addressed.

Keyword: IYCF, Complementary feeding, Breastfeeding

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 and infant feeding practices comprising of both the breastfeeding as well as complementary feeding have major role in determining the nutritional status of the child.¹ 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 age²

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. Worldwide, more than 9 million children under 5 yr 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.⁵ Undernutrition is associated with at least 35% of childhood mortality. It is also a major disabler preventing children who survive from reaching their full development potential. Around 30% of children less than 5 yr of age in developing countries are stunted & 10% are wasted.²

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

II. Materials and Methods

Sample of study: The present 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, Meerut. The localities covered by UHTC, were **Old and New Arya Nagar, Old and New Hanumanpuri, Old and New Bansi pura, 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 as 384.

Period of Study: The data for this study was collected from February 2012 to July 2012.

Sampling method: A house to house survey was done to cover the entire area, so that desired number of children could be found out and a total number of 400 children (6 months to 36 months of age) were found out by this survey. The mothers of all 400 children were cooperative, so all 400 cases were studied & analyzed. Detailed information regarding child rearing practices, especially infant and young child feeding practices was collected by interviewing mother/foster mother. Socio demographic characteristics of the study population were collected on predesigned and pretested Performa.

Data processing and analysis: 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, analyzed & statistically evaluated.

III. Result

Table-1 Core Indicators

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

In all only 15.0% mothers started breastfeeding within 1 hr of birth, while one third (29.8%) started complementary feeding at 6 month. Among 400 mothers, 42 did not give prelacteal feed, out of which only 21 (5.3%) exclusively breastfed for 6 months while 38.3% exclusively breastfed for six month duration. 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)

Table: 2 Complementary Feeding Practices among children

Age of initiation of complementary feeding practices	Number	Percentage
<6 month	62	15.5
At 6 month	119	29.8
>6 month	211	52.7
Not yet started	08	2.0
Total	400	100.0

In all, complementary feeding was started in 98% children and only 2% children were only at breast feeding. More than half (52.7%) of mothers initiated complementary feeding more than 6 month of age while 29.8% started at 6 month and 15.5% less than 6 month of age. (Table-2)

Table: 3 Type of Supplemental food used

Type of food	Number	Percentage
Suji ki kheer	83	20.7
Rice/Wheat	61	15.2
Dal ka pani	85	21.3
Cerelac	160	40.0
Others (halwa, juice etc)	3	0.8
Not yet started	8	2.0
Total	400	100.0

Table-3 shows that most of mothers (40.0%) used Cerelac as a supplemental food while Dal ka pani, Suji ki kheer, Rice/Wheat and Halwa/Juice etc was used by 21.3%, 20.7%, 15.2% and 0.8% respectively.

Table: 4 Appropriate complementary feeding practices

Meal frequency	Number	Percentage
Adequate	170	43.4
Inadequate	222	56.6
Total	392	100.0
Amount		
Adequate	118	30.1
Inadequate	274	69.9
Total	392	100.0
Appropriate complementary feeding		
Correct	133	33.9
Incorrect	259	66.1
Total	392	100.0

Out of 400 mothers, 392 mothers had started complementary feeding, among them, meal frequency & amount were adequate in 43.4% and 30.1% respectively. The appropriate complementary feeding was correct in 33.9%. (Table-4)

Table: 5 Hygiene practices for complementary feeding

Hygiene practice		Number	Percentage
Washing hands with soap before food preparation	Yes	238	59.5
	No	162	40.5
Washing hands with soap before & after feeding	Yes	237	59.3
	No	163	40.7
Washing hands with soap after defecation	Yes	336	84.0
	No	64	16.0
Use separate utensil	Yes	241	60.3
	No	159	39.7
Use of boil water	Yes	60	15.0
	No	340	85.0

Practice of washing hands with soap before food preparation and before and after feeding was followed by only 59.5% & 59.3% respectively, however washing hands with soap after defecation was done by majority (84.0%). Only 15.0% mother use boil water to prepare baby food, while 60.3% mothers use separate utensil for baby feeding. (Table-5)

IV. Discussion

The present study was carried out in 400 children, between 6 to 36 months of age, to study the child rearing practices, with special emphasis on infant and young child feeding practices and also to find out its relationship with malnutrition and other socio-demographic factors.

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.

47.7% children belonged to 1st birth order while 38.0% & 14.3% belonged to 2nd and 3rd or more than 3rd order respectively. Majority of children (98.7%) were Hindu by religion, while 1.3% belonged to Sikh religion.

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)³, quiet lower then 25.0%, 42.2%, 61.6%, 36.6% and 38.1% as reported by NFHS-3 (2005-06)³, CATA report (2005)⁴, Dongre et al (2010)⁵, Gupta et al (2010)⁶ and Ravall et al (2011)⁷ respectively and quite higher than 6.3% according to Kumar et al (2006)⁸.

In the present study, 29.8% of mothers initiated complementary feeding at 6 month of age, this finding is consistent with 23.9% as per DLHS-3⁹, quite lower than 77.5%, 71.66% and 50.0% as depicted by Rao (2011)¹⁰, Roy et al (2009)¹¹ and Mukhopadhyay et al (2005)¹² respectively and quite higher than 17.5% and 13.0% according to Aggarwal et al (2008)¹³ and Population Council¹⁴ respectively.

In present study, among 400 mothers, 42 did not give prelacteal feed, out of which only 21 (5.3%) exclusively breastfed for 6 months while among those who gave prelacteal feed, 38.3% exclusively breastfed for six month duration while the rate of exclusive breastfeeding as reported by NFHS-3 (2005-06)¹⁵, fact sheet of Uttar Pradesh¹⁶, Kishor et al (2009)¹⁷, Muchina & Waithaka (2010)¹⁸ and Sinhababu et al (2010)¹⁹ was less than half, 31.8% in urban, 10.0%, 12.6% and 57.1% respectively.

In present study, among 7 food groups used to find out minimum dietary diversity, two third of children (79.6%) were given food from four or more food groups while NFHS-3 (2005-06)¹⁵ in Uttar Pradesh, Sikkim and Kerala reported 35.4%, 70.6% and 73.9% respectively.

In present study, 40.0% of mothers used Cerelac as a supplemental food while Dal ka pani, Suji ki kheer, Rice/Wheat and Halwa/Juice etc was used by 21.3%, 20.7%, 15.2% and 0.8% respectively. According to NFHS-3 (2005-06)¹⁵ the most common types of solid or semi-solid foods, fed to both breastfeeding and non breastfeeding children under three years of age, are foods made from grains (including bread, *roti*, *chapati*, rice, noodles, biscuits, and *idli*), fruits & vegetables rich in vitamin A, and food made from roots and according to Rao (2011)¹⁰ Ragi, wheat and rice were the most common home-made complementary food used.

In present study, 98% mothers had started complementary feeding, among them, meal frequency & amount were adequate in 43.4% & 30.1% respectively, while NFHS-3 (2005-06)¹⁵ in Uttar Pradesh, Sikkim and Kerala reported the percentage of minimum meal frequency as 33%, 63.7% and 79.4% respectively. According to Rao (2011)¹⁰ and Aggarwal et al (2008)¹³, quantity was adequate in 32% and 25.0% respectively.

In present study, appropriate complementary feeding was correct in 33.9% while according to Ramji (2009)²⁰, 42% of infants received the recommended appropriate foods at appropriate frequency. In October 2009, the Population council¹⁴ conducted a formative study in rural Uttar Pradesh. Findings show that, 63% children were given the minimum recommended number of feeds in a day.

In present study, only 13.5% mothers used formula milk as complementary feeding which is consistent with finding of NFHS-3 (2005-06)¹⁵, reporting the use of formula milk among breast fed children, 9.1% and in non breastfed children, 17.4% and of Madhu et al (2009)²¹ in Karnataka, where only 19% mothers used commercial formula milk.

More than half (57.7%) of mother used responsive feeding to their child in present study, while according to Wondafrash et al (2012)²² in Derashe district, 76.0% of caregivers practiced a responsive feeding style.

In present study, practice of washing hands with soap before food preparation and before and after feeding was followed by only 59.5% & 59.3% respectively, however washing hands with soap after defecation was done by majority (84.0%). Only 15.0% mother use boil water to prepare baby food, while 60.3% mothers use separate utensil for baby feeding, while Halder et al²³ (2010) in rural Bangladesh, reported that less than 1% of mother used soap and water for hand washing before eating and/or feeding a child. More commonly people washed their hands only with water, 23% after defecation and 5% before eating.

1.6% and 44.7% respectively.

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