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Original Research Article

Infant and Young Child Feeding Practices in Urban Slum Pre-School Children in Davangere

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ABSTRACT

Background and Objectives: Infant and young child nutrition is extremely important as it not only lays the foundation for good health throughout the life but, also provides a good workforce. Nutrition is therefore, an issue of survival, health and development for current and succeeding generations.
The purpose of the study was to assess the current infant feeding practices in children between the age group of 6 months – 2 years, to find the reason for inappropriate CF practices and to assess the knowledge of mothers regarding CF.
Methods: This cross sectional study was conducted in the selected 5 urban slum areas of Davangere and 300 children were selected aged between 6 months to 2 years using pre-designed, semi –structured questionnaire. Demographic profile and mother's knowledge regarding CF was recorded. Cause of inappropriate CF was ascertained by open – ended questions.
Results: Among the 300 children studied, only 39 (13%) children received CF at the appropriate time that is after 6 months. Of the remaining 247 children who were started on complementary feeds, 52(17.3%) mothers had introduced CF earlier than 6 months, and 80 (26.66%) mothers introduced CF between 7-9 months of age, and 76 (25.33%) mothers introduced CF between 12 months – 2 years. Knowledge about the proper timing of introduction of CF was present in 39 (13%) of mothers. Only 19 (6.33%) mothers had correct knowledge of the proper timing of introduction, adequate quantity and consistency of CF. Most common reasons for delayed introduction of CF was "child's refusal to eat" in 47 (15.66%). An interesting finding that emerged was that, the incidence of bottle feeding was low 11(3.65%).
Conclusion: The results of the study shows that, inspite of the ongoing Reproductive and Child Health (RCH) programme from past 5 years, the knowledge, attitude and practices regarding IYCF remains poor. There is an urgent need to bridge the "knowledge gap" and "practice gap" of mother's from urban slum and lower socio economic strata of the community by further strengthening the on-going health programme, and promoting knowledge and practice in mothers of urban slum areas.

Key Words: Complementary feeding, exclusive breastfeeding, Infant & young Child feeding, urban slums

INTRODUCTION

Adequate nutrition during infancy and early childhood is fundamental to the development of each child's full human potential. It is well recognized that the period from birth to two years of age is a "critical window" for the promotion of optimal growth, health and behavioral development. [1] Following the 2001 expert consultation and the 2002 publication of a

WHO commissioned systematic review, [2] the global recommendation is that, exclusive breastfeeding is now recommended for the first 6 months of life with the introduction of complementary feeds thereafter and continued breastfeeding for the first 2 years. [3] Malnutrition during the critical phases of early growth, can lead not only to the stunting of physical growth, but also to sub-optimal intellectual development and poor neuro-integrative competence in children. [4] Complementary feeding practices are often inadequate in developing countries,resulting in a significant nutritional decline between 6 - 18 months of age. Incidence of malnutrition increase between 6 & 18 months, the period of complementary feeding. Every mother who has to transit from breastfeeding to complementary feeding is likely to come across various difficulties and problems. This study will provide insight into the Infant and Young Child Feeding practices of urban slums, knowledge of mothers regarding complementary feeding and reasons for inappropriate complementary feeding practices.

MATERIALS AND METHODS

Source of Data:

The study was conducted in the urban slum areas present in the outskirts of city of Davangere. The present study includes 5 slum areas with a total population of 23,061. Most of the families in these slums live in a Kuccha, crowded single room houses with poor environmental hygiene. Major water source are the few bore wells in the locality with a handful having municipality water supply. Most of the families practice open air defection. The 5 slum areas of Mehabobnagar, Mustafanagar, Shivanagar, Sadashivanagar and Bashanagar were chosen because a well functioning RCH programme was already in place in this community for over 5 years.

Type of Study: Cross sectional study

Study Period: August 2007 to September 2008.

Method of Collection of data:

Sample Size:

During the period of study; a total of 300 children (6 months – 2 years) found during house to house survey form each of the 5 urban slum areas were included in the study.

Inclusion Criteria:

Apparently healthy children (6 months – 2 years) found during house to house survey in the selected urban slums of Davangere City were included in the study.

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Exclusion Criteria:

- Children with lethal congenital malformation.
- Prematurity
- Low birth weight
- Twins
- Children with chronic illness

Methodology:

The study was conducted by doing house to house survey in the selected slum areas with the help of the area health worker. Data was collected by interviewing the mothers on a pre-designed, semistructured proforma with specific questionnaires on child's age, order of birth, No. of children in the family, place of delivery, timing of initiation of complementary feeding, mode of feeding the child, advice received regarding feeding, problems faced when introduced complementary feeds and reasons for early and late introduction of complementary feeds were collected.

Ethical clearance: This study was approved by ethical committee of JJMMC, Davangere.

Patient consent: Written informed consent obtained from all participant's parents.

RESULTS

Demographic characteristics of the study population is shown in Table 1.In the present study, 17.3% of the mothers had introduced complementary feeds earlier than 6 months; 13% at 6 months, 26.66% between 7-12 months, 25.33% between 12-24 months. 12% of mothers had not introduced complementary food in the age group between 7-12 months and 5.66% of mothers between 13-18 months.

In the present study, 15.66% of the mothers delayed introduction of CF because of child's refusal to eat, 12.66% of the mothers thought infant cannot digest too much food, 9.33% of the mothers were unaware of the weaning schedule and 4.33% of the mothers thought that they had adequate breast milk .In the present study, 30.66% of the mothers exclusively breastfed their children for 6 months.

Table-1 Demographic Characteristics of Study Population

Variable	**Frequency (%) (n=300)**
Age of children :	
6 – 8 months	47 (15.7)
9 – 12 months	119 (39.7)
13 – 18 months	87 (29)
19 – 24 months	47 (15.7)
Sex :	
Males	188 (62.7)
Females	112 (37.3)
Mothers Education :	
Illiterate	184 (61.3)
Primary Education	92 (30.7)
High School	21 (7.0)
Pre University	3 (1.0)
Mothers occupation :	
House Wife	236 (78.7)
Unskilled	47 (15.7)
Skilled	10 (3.3)
Self Employed	7 (2.3)
Type of Family :	
Nuclear	195 (65.0)
Extended	41 (13.7)
Joint	64 (21.3)
Order of Birth :	
1	129 (43.0)
2	128 (42.7)
3 +	43 (14.3)
No. of Children in Family :	
1	119 (39.7)
2	106 (35.3)
3+	75 (25.0)
Religion :	
Muslim	248 (82.7)
Hindu	52 (17.3)

Table-2 Knowledge, Attitude, Practices Of Mothers Regarding Infant Feeding.

Variable	Frequency (%) (n=247)
Why do you need to complementary feeding (CF) :	
Breast milk alone is inadequate for child	123 (49.79)
To satisfy child's hunger	59 (23.88)
For the fast growing of the child	36 (14.54)
Do not know	29 (11.74)
Nature of Food when introduced CF :	
Liquid	66 (26.72)
Semi liquid	168 (68.01)
Solid	13 (5.26)
Advice received from for feeding the child :	
Family members	92 (37.24)
Health Personnel	46 (18.62)
Mass media	11 (4.45)
Neighbors / Friends	82 (33.19)
Literatures / News Papers	06 (2.42)
Self Introduction	10 (4.04)
Do you wash hands before feeding the child :	45 (18.21)
Always	185 (74.89)
Sometimes	17 (6.88)
Never	
How do you clean the utensils used for feeding the child:	
Washing with water only	45 (18.21)
Washing with detergent and water	185 (74.89)
Boiling after washing with soap and water	17 (6.88)
How many times do you clean the feeding articles :	
Once a day	21 (8.50)
Before and after each feeding	198 (80.16)
Do not clean regularly	28 (11.33)
When do you prepare the food for feeding the child :	
Just before feeding the child	112 (45.34)
Prepare and keep	102 (41.29)
After the child starts crying	33 (13.36)
What is the mode of feeding the child :	
Hands	88 (35.62)
Hands + Spoon	87 (35.22)
Spoon	34 (13.76)
Bottle	11 (4.45)
Katori	19 (7.69)
Cup	8 (3.23)
What do you do with the left over feed :	
Discard it immediately	107 (43.31)
Re-feed after warming it	83 (33.60)
Smell it, if not spoilt feed the child	12 (4.85)
Feed it to other children	45 (18.21)
What do you do when child refuses to eat a particular preparation :	
Forcefully feed the child	47 (19.02)
Give as much as the child takes	160 (64.77)
Change the feed in next feeding	40 (16.19)

In the present study, 18% of the children refused to eat when started complementary feeds, 13% of the children became irritable, 9% of the children spitted

the food, 7.3% of the children vomited the food and 5% of children had diarrhea when complementary food was introduced.

Knowledge, attitude, practices of mothers regarding infant feeding is shown in Table 2. The consistency of the food was appropriate in 48.9% between age group of 6-8 months, adequate in 47% between age group 9-12 months, adequate in 60% between13-18 months and was less than appropriate in 76% between 19-24 months.

DISCUSSION

Childhood under-nutrition continues to be a major public health problem throughout the developing world and is one of the principal underlying causes of death and disease in many children of the world. [5-7] Weaning is the most critical period for the growth of the child. This is the time when growth faltering and nutritional deficiencies manifest in children. [8] Infant and Young child feeding which includes breastfeeding and complementary feeding practices, is comprised of various dimensions, namely, the type, the quality, the texture, the nutrient density, the frequency of feeding, and the diversity of the diet. Also the safety of food fed and the manner in which it is fed to the child are added dimensions to the whole spectrum of IYCF. [1,9]

Malnutrition rates increase between 6 and 18 months the period of complementary feeding. In the present study 84% of the children were in the age group of 6-18 months and 16% children in the age group of 19-24 months. A similar proportion of number can be seen in the study done by Aggarwal et al, [10] at Delhi where the age group of children studied between 6-18 months is 86% and that between 19-24 months is 14%.

Breast milk provides best and complete nourishment to the baby during the first 6 months, exclusive breastfeeding provides babies with the best start in life. [11] In the present study, only 30.66% of the mothers practiced exclusive breastfeeding for the first 6 months. This is in contrast to the study done by Aggarwal et al., [10] at Delhi where in 50% of the mothers practiced exclusive breastfeeding till 6 months. This difference can be attributed to the good educational status in the above study, where as in this study there were 61% of the mothers who were illiterate. In a study done by Banapurmath CR, et al., [12] to assess the breastfeeding practices in villages of central Karnataka 26.8% mothers exclusive breastfed their children for 6 months which is similar in comparison to this study. Exclusive breastfeeding rates are less than 50% in majority of studies from lower income countries. [13,14] This highlights the "knowledge gap" which can be bridged by increasing the awareness, female literacy, strengthening the on-going nutritional educational programme and advising mothers during immunization session.

Adequate CF from 'at about' six months of age, while continuing breastfeeding is extremely important for sustaining growth and development of the infant. In the present study, there was a definite delay in the initiation of complementary feeding. 26.66% mothers had introduced complementary feeds between 7-9 months, 25.33% mothers had introduced complementary feeding between 12-24 months. 17.66% were not started on complementary feed at all even upto 18 months. This study is almost similar with the study conducted by Aggarwal et al., [10] in Delhi where in 77% mothers delayed complementary feeding. 34.5% mothers having introduced complementary feeding between 7mo – 1 year, 26.5% mothers having introduced complementary feeding between 1-2 years and 16% of the mothers did not start complementary feeding even at 2 years. In a study done by Banapurmath

CR, et al., [12] to study the breastfeeding practices in villages of central Karnataka, the timely complementary feeding rate is 57.3% among infants from 6-10 months of age which is in contrast to this study.

In the present study 56% mothers were giving semi- liquid food in the form of Ragi/Rice porridge to their children and 22% mothers were giving liquid foods in form of top milk; frequency of feeding in the age group of 6-8 months was less than adequate i.e., 1-2 feeds/day in 14.46% and 3+ feeds/day in 10.63% and was adequate in the age group of 9-24 months were in mothers give 3 and more feeds per day in 52.96% of the children. This differs from the study done by Aggarwal et al., [10] at Delhi, where in 39.3% of mothers are giving three or more feeds per day to children between 6 months to 2 years and majority are giving thin feeds 62%.

In this study only 19 (6.33%) mothers had proper knowledge regarding the timing of initiation of CF, frequency of feeding to be given and consistency of food. This is in concordance with study done by Aggarwal et al., [10] at Delhi, where in 3.5% mothers started CF at proper time; in adequate quantity and with proper consistency. This highlights the "practice gap" in CF and the need for appropriate intervention. This is similar to a study done by Asha D Benakappa which showed that healthy feeding practices are few, and inappropriate ones predominant by the caregivers. [15]

The present study shows that the rate of bottle- feeding is not high i.e., 3.65% as compared to NFHS 3 data of 15%, [16] which can be attributed to the good feeding practices of mothers like using cup and spoon to feed their babies and the advice received during the RCH visits regarding disadvantages of bottle-feeding. This is similar to the study done to know the status of infant and young childfeeding, at Davangere in which the rate of bottle-feeding is 4.1%. [17]

CONCLUSIONS

The knowledge, attitude and practices of mothers regarding Infant and Young Child Feeding were poor among the studied population. Maternal illiteracy could be associated with delayed and inappropriate complementary feeding practices in the study. Involving elderly caregivers and mothers along with health workers may improve infant feeding practices in urban slums. This study highlights the need to strengthen the on-going RCH programme, utilize the missed opportunities for improving complementary feeding practices by education and imparting information in the urban slum population.

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