International Journal of Contemporary Pediatrics
Rajesh D et al. Int J Contemp Pediatr. 2016 May;3(2):350-354
http://www.ijpediatrics.com
pISSN 2349-3283 | eISSN 2349-3291

DOI: http://dx.doi.org/10.18203/2349-3291.ijcp20161005

Research Article

A study on infant feeding practices in the urban slums: a cross sectional study

Rajesh D.*, Bhavana D.

Department of Pediatrics, VIMS, Bellary, Karnataka, India

Received: 16 April 2016
Accepted: 23 April 2016

***Correspondence:**
Dr. Rajesh D.,
E-mail: ramspsm@gmail.com

ABSTRACT

Background: Infant feeding practices comprising of both breastfeeding (BF) as well as complementary feeding (CF) have major role in determining the nutritional status of the child. 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.
Methods: The purpose of the study was to assess the current infant feeding practices in children between the age group of 6months-1years, to find the reason for inappropriate CF practices and to assess the knowledge of mothers regarding CF.
Results: Out of 150 children studied, 33 (22%) had practiced exclusive breast feeding, and 91 (60.7%) children received CF at the appropriate time i.e., around 6 months, 87 (58%) gave complementary feeds with appropriate consistency, 49 (32%) gave with appropriate frequency and 98 (65.5%) with appropriate amount so overall prevalence of the optimal complementary feeding was only 28 (18.7%).
Conclusions: 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 breastfeeding programme, breastfeeding knowledge and practice of mothers in urban slum areas.

Keywords: Infant and young child feeding, Complementary feeding, Exclusive breast 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 behavioural development.[1]

Following the 2001 expert consultation and the 2002 publication of a WHO commissioned systematic review, 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.[2,3]

A review of the relevant literature published during the last 10 years and of the statements/recommendations/resolutions by various world bodies reveals that almost since 1993, the recommended duration of exclusive breastfeeding is "about six months of age".[4]

Very few infants worldwide are exclusively breastfed during the first 6 months of life and complementary feeding begins either too early or too late with foods which are often nutritionally inadequate and unsafe. The concerned areas being the changes in feeding practices of infants and small children that occur as a precondition for improved nutritional status. Poor feeding practices therefore are a major threat to social and economic development as they are

among the most serious obstacles to attaining and maintaining health of this important age group.[5]

Nutrition of children is of paramount importance because the foundation for lifetime health, strength and intellectual vitality is laid during that period. 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.[6]

Most of the recommendations use a general term like "around", "about", "at least". So that introduction of the complementary foods could be a little earlier or later depending on the Situation. After all it cannot be exactly on the next hour or day of completing six months!

Complementary feeding practices are often inadequate in developing countries, resulting in a significant nutritional decline between 6 months - 12 months of age. Malnutrition rates increase between 6 & 12 months, the period of complementary feeding.

METHODS

A cross sectional descriptive study was conducted in the urban slum areas present in the outskirts of city with total population of 12,061. 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. Mothers of infants dwelling in the urban slums of city.

Method of collection of data

Sample size

Considering the exclusive breast feeding rate of 44% (according to NFHS 3) the sample size was calculated using the formula pq/L^2 where (p is the prevalence of EBF = 44%, q is (i-p) is 56, L is the allowable error of 20%) a sample size of 143 was calculated

Simple random sampling technique was adopted where the whole area Tumkur was divided geographically divided into 4 quadrants and within each quadrant one slum was randomly selected. A total of 4 slums were selected and within each slum 37 to 38 mothers of infants were selected randomly from the Anganwadi registers. A total of 150 mothers were included in the study.

Inclusion criteria

Mothers of infants (less than one year) in the urban slum.

Exclusion criteria

- Mothers with children having developmental delay, congenital anomalies and any other systemic disorder.
- Mothers with IDV positive.
- Mothers with serious disorder (Exp; Psychosis, Locational failure.

The study was conducted on every Tuesday of the week, by doing house to house survey in the selected slum areas with the help of the area health workers.

Data was collected by interviewing the mothers on a pre-designed, semi structured proforma with specific questionnaires on child's age ,order of birth, number of children in the family, place of the delivery, timing of initiation of complementary feeding, mode of feeding the child, advice received from for feeding, problem faced when introduced complementary feeding .

RESULTS

In this study 45.3% of the mothers are between age group of 21-25 years, 26% are between 26-30 years,18% are <20% and 105 are >30% with Mean SD 24.89 7.82. 70.7% belongs to Hindu community, 24% to Muslim and8% to Christian community 64% lives in nuclear family and 36% in joint family.

Table 1: Socio-demographic profile of the mothers.

Variable	Frequency	Percentage
Age group		
≤ 20 yrs	28	18.7
21 - 25 yrs	68	45.3
26 - 30 yrs	39	26.0
> 30 yrs	15	10.0
Mean ± SD	24.89 ± 7.82	
Religion		
Hindu	106	70.7
Muslim	36	24.0
Christians	8	5.3
Others	-	-
Type of family		
Nuclear	96	64.0
Joint	54	36.0

In the present study 52.7% of the children belong to 7-9 months and 47.3% between 9-12 months with Mean± SD 9.22 ± 2.2.52% of children are male and 48% female 25.5% with birth order one, 62.7% with second and 12% with third (Table 2).

At the time of study 52% of the initiated early breast feeding, 34% have given prelacteal feeds, 64% mothers have given colostrum and the exclusive breast feeding rate at the end of 6 months was 22% (Table 3).

In the present study 60.7% mothers have initiated complementary feeds at appropriate time, 58% have given complementary feeds of appropriate consistency, 32.7% have given at appropriate frequency and 65.3%

have given appropriate amount. The infants who were weaned at appropriate time and fed with appropriate consistency, frequency and amount were considered to be practicing optimal complementary feeding and were found that only 18.7% of the mothers were practicing optimal complementary feeding (Table 4).

Table 2: Profile of the child.

Variable	Frequency	Percentage
Age in months		
0-6 months	45	30.0
7 - 9 months	34	22.7
9 - 12 months	71	47.3
Mean ± SD	9.22 ± 2.2	
Gender		
Male	78	52.0
Female	72	48.0
Birth order		
First	38	25.3
Second	94	62.7
Third and above	18	12.0

Table 3: Breast feeding practices.

Practices	Frequency	Percentage
Early initiation		
Yes	78	52.0
No	72	48.0
Prelacteal feeding		
Yes	51	34.0
No	99	66.0
Colostrum feeding		
Yes	96	64.0
No	54	36.0
Exclusive BF for 6 months		
Yes	33	22.0
No	117	78.0

Table 4: Complementary feeding practices.

Practices	Frequency	Percentage
Appropriate time of initiation		
Yes	91	60.7
No	59	39.3
Appropriate consistency		
Yes	87	58.0
No	63	42.0
Appropriate frequency		
Yes	49	32.7
No	101	67.3
Appropriate amount		
Yes	98	65.3
No	52	34.7
Optimal feeding practice		
Yes	28	18.7
No	122	81.3

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.[7-9] Half of India's under - five populations is undernourished.

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.[10]

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.[11]

Most mothers have adequate milk for proper growth of an infant up to 6 months of age. However, it is commonly observed that mothers often introduce top milk to infants much before 6 months as they think their milk is in-sufficient either because of their perception of inadequate growth of infant or perceived cause of child crying too often.[12]

Age distribution

Complementary feeding practices are often inadequate in developing countries, resulting in a significant nutritional decline between 6 to 12 months of age. Malnutrition rates increase between 6 and 12 months the period of complementary feeding.

In the present study 22.7%% of the children were in the age group of 7-9 months and 47.3% children in the age group of 9-12 months This in contrast to the study done by Manan WA in Terengganu, to study infant feeding practices in rural and semi-urban communities were in a total number of 46% children were between 6-24 months.[13]

A similar proportion of number can be seen in the study done by Aggarwal et al at Delhi where the age group of children studied between 6-18 months was 86% and that between 19-24 months was 14%.[14]

Sex distribution

In the present study, 52% of the studied children were male and 48% were female. This is similar in comparison with the study done by Aggarwal et al at Delhi where in 60% of the study population were male and 40% female.[14]

In a study done by Dinesh Kumar et al to assess the influence of infant feeding practices on nutritional status of under five children, 63% of children were male and

36% of the study population were female which again is similar in comparison with this study.[15]

Exclusive breastfeeding

Exclusive breastfeeding means that babies are given only breast milk and nothing else – no other milk, food, drinks and not even water. During the first 6 months, exclusive breastfeeding should be practiced. 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.[5]

In the present study, only 22% of the mothers practiced exclusive breastfeeding for the first 6 months.

This is in contrast to the study done by Aggarwal et al at Delhi where in 50% of the mothers had practiced exclusive breastfeeding till 6 months.[14] 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 Dinesh Kumar et al at to assess the influence of infant feeding practices, on nutritional status of children in Anganwadi areas of urban Allahabad, 23.5% of mothers were exclusively breastfeeding their children where as 76.5% of mother did not which is similar in comparison to this study.[15]

In a study done by Banapurmath CR 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.[16]

According to the NFHS-3 data, exclusive breastfeeding from 0-6 months in rural areas is 47% and in urban areas it is 45%.[17]

In a study conducted by Manan WA in Terenggan to study infant feeding practices in rural and semi- urban communities, 53.5% breastfed under 6 months and only 22.3% of the mothers breastfed their children more than 12 months which is in contrast to this study.[13]

In a study done by Aneja et al.,[18] in Delhi slums, only 20% infants were exclusively breastfeeding for 5-6 months and in a study done by Kulwa KB et al in the urban slums of Tanzania, the prevalence of exclusively breastfeeding was very low i.e., 9%.[19] The results of these studies are low when compared to this study.

Data from urban slums and resettlement colonies repeatedly documented that although the breastfeeding was very common, exclusive breastfeeding was practiced only in 30-40% of infants younger than 4 months of age.[18]

Exclusive breastfeeding rates are less than 50% in majority of studies from lower income countries.[20,21]

All the above studies show that exclusive breastfeeding among infants in the age group of 0-6 months continues to be low.

The study shows that the knowledge of mothers regarding the timing of exclusive breastfeeding is poor in urban slum areas.

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.

CONCLUSION

This study also reveals that the complementary feeding practices are inappropriate in large number of children.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Rajesh D, Bhavana D. A study on infant feeding practices in the urban slums: a cross sectional study. Int J Contemp Pediatr 2016;3:350-4.