

Exploring the Diversity in Feeding Practices among the Urban Slum Children of Raipur, Chhattisgarh

Sharmistha Roy¹, Dr Aruna Palta²

¹Research Scholar, Govt. Dudha Dhari Bajrang Girls' P.G. Autonomous College, Raipur (C.G.), India

²Principal, Dr. RadhaBai Govt. Naveen Kanya Mahavidyalaya, Raipur (C.G.), India

Abstract: **Background:** Feeding of breast milk till two years of age and initiation of complementary feeding at proper age are thrust areas of good nutritional status of infant and young children. **Objective:** The objective of the present study is to explore the feeding pattern of the infant and young children (more than six to thirty-six/months) in slums of Raipur city. **Method:** An exploratory study was conducted among randomly selected 211 children aged >6 months to 36 months in ten urban slums from four zones of Raipur. Infant and young child feeding practices and socio-demographic profile of 211 children were collected using structured questionnaire. **Results:** Percentage of children who were exclusively breast fed was highly satisfactory (79.1%); still the ritual of giving prelacteals after birth was there among one-fifth caregivers (20.9%). Prelacteals like honey, sugar water and plain water are given to the newborn. 71.64% mothers fed their child for only 10 to 15 minutes only. Strong evidence of relationship between nutritional status & the inclusion of number of food groups in complementary feeding of the children was found (Chi square=11.68, df =2, p = <.003). **Conclusion:** Behaviour change communication (BCC) should be prioritized.

Keywords: minimum dietary diversity, exclusive breast feeding, infant and young child feeding, urban slums, complementary feeding, severe acute malnutrition

1. Introduction

Proper infant feeding and timely initiation of complementary feeding plays a crucial role in supporting the nutritional status especially proper growth, health and development of children. National, state level (Chhattisgarh) data has shown an upward inclination in the number of nourished children. Since long time the focus was centered on the children of urban and rural areas. Time has come when we need to think of the slum children especially the vulnerable group children i.e. children under five years of age. The percentage of stunting (chronic malnutrition) and wasting (acute malnutrition) children of Chhattisgarh are more than the national average.²

Long term breast feeding has potential impact across life course through its influence on childhood cognition and educational attainment.³ Breast milk alone would not be able to maintain optimal growth of children after six months so it is crucial to timely introduce solid and semi solid food.⁴

The objective of the present study is to explore the feeding pattern of the infant and young children (>6 to 36 months) who are residing in the slums of Raipur city (Chhattisgarh).

2. Review of Literature

Annually, life of 1.5 million under-five children can be saved if improvement of exclusive breast-feeding, adequate and timely complementary feeding along with continued breast-feeding for two years or beyond can be practiced.⁵

Study in 4 urban slums of Raipur among 163 under five children showed that Minimum Dietary diversity between the breastfed and non-breastfed infant were found to be significantly different.⁶

3. Problem Definition

Minimum dietary diversity (MDD) is defined as the proportion of young children who are receiving at least 4 food groups out of the 7 food groups classified by WHO during each meal. Children fail to receive the four food groups in each meal shows falter in growth.

4. Material and Methods

Design of study: An Exploratory study was conducted among 10 slums of Raipur urban area.

Study area: The slums of Raipur have been classified into eight Zones. Total 70 wards are there in these 8 zones. Total 398 slums are there. Randomly 10 slums from 4 zones were selected.

Study population: From each slum at least 20 children above 6 months to 3 years were randomly selected. 211 children belonging to 7 months to 3 years formed the sample of the study.

Sampling: It's basically a multistage simple random sampling. Firstly 4 zones were selected from the 8 zones. From these 4 zones 10 slums were selected.

Study Methods:

Permission of the study was obtained from the Mayor of the Nagar Palika Nigam, Raipur. A structured pre tested questionnaire was used to collect the information on socio demographic profile, dietary intake and food frequency.

Anthropometric measurements:

Nutritional status of the children were measured in terms of weight for length/ height (measure of stunting) and mid upper arm circumference (MUAC) – to measure wasting.

Weight was measured by help of weighing machine (bathroom balance), length measured with help of length board and height with a height measuring board, the MUAC was measured with a simple tri colour MUAC tape.

Data management and analysis:

Data was entered and analyzed using the Microsoft excel and SPSS 16.

5. Results

In the present study total 211 of >6months to under 3yearshad beenenrolled. Caregivers of the children gave information on socio demographic, feeding pattern. In the survey 94% respondents were mothers, 3% grandmothers, 2.5% were paternal aunts and 0.5% (only 1 out of 211) respondent was father. Of the total children included in the study 62.6% were male children and rest were girl child.

Composition & characteristic of household

In the urban slum, majority of household i.e. 93.8% were Hindus and rest from other religion. More than half of the samples belonged to other backward class (53.08%). 56.7% were having nuclear family, 41.2% were having joint family and rest 1.9% were having extended family. Family size of the sample was diverse, Table 1 shows the number of times the mother became pregnant.Total number of living children in family ranged from 1 to 5. 26.1% family had 3 or more than 3 children. The mean age of the sample was found to be 2.3 years (SD= 0.97). 70.6% sample was found to have their own house. More than half (50.7%) are going for open defecation. 6.6% of the total sample uses community toilet and rest 42.7% were having proper toilet facility at their home.48.3% uses corporation water as source of drinking water, 49.8% uses underground water (bore tunnel)and 1.9% uses well water for drinking purpose. Only 17% was found to consume safe drinking water. More than half (59.7%) uses LPG gas as cooking fuel,36% uses bio-fossil and wood as cooking fuel, rest (4.3%) uses both.

Livelihood pattern

71% of the family earned on daily wages. 15.64% women were earning on daily wages. 3.32% mothers were functioning as voluntary worker of the community. Most of the urban slum dwellers i.e. 46.4% owe agricultural land in village.24.2% have domestic animals in the village. This shows that more than half of the people residing in the urban slum of Raipur had migrated from the rural counterpart.

Table 1: Number of times the mothers were pregnant

Pregnancy	n	%
first time	60	28.44
twice	74	35.07
thrice	44	20.85
more than three	14	6.64
more than four	17	8.06
more than five	2	0.95
total	211	100.00

Breast feeding and complementary feeding practices:

Breast feeding study in Lancet series, showed that in poor countries ten million children die every year due to preventable causes.⁷ Breastfeeding for long time reduces the chances of childhood chronic illnesses,⁸ like pneumonia,

diarrhea, boost the immunity system of the child, help in proper development of brain.⁹ In the present study (Table 2), we analyzed the breastfeeding indicators of the children in terms of – number of children received breast milk within the first hour of birth, number of children exclusive breastfed, duration of feeding, number of years the child received the breast milk.

Early nutrition during the sensitive period is the pillar of future health, malnutrition during this period may result to disease in adult life.¹⁰Numerous protective factors are present in human breast milk which helps the child to fight against infectious disease and strengthen the immunity system.^{11,12}The duration of breast feeding was measured in minutes and was divided as 10-15 minutes, 15-20 minutes, 20-25 minutes and 25–30 minutes and it was found that 71.64% mother were breast feeding their young ones for 10-15 minutes, 7.96% for 15-20 minutes, and 20.4% for 25-30 minutes. All the mothers gave positive respond to night feeding. 47% mothers responded to feed their infants on specific time, rest 53% provide their breast milk on demand from the younger ones.

Table 2: Breastfeeding indicators

	n	%
Children received breast milk within the first hour of birth	136	64.5
Number of children received Pre-lacteals	44	20.9
Number of children who were exclusively breast fed	167	79.1
Total number of children received breast milk till 2 year	65	60.2
Number of children received both fore milk & hind milk	51	24.2

28% children less than 6 months of age were introduced to complementary feeding. Breastfeeding along with complementary feeding till 2 years of age was found among 20.4% children. Figure 1 shows the percentage of children age wise, introduced to complementary feeding.

The minimum dietary diversity of the children was analyzed based on the number of food groups consumed by the child on daily basis (mean=2.2, SD=0.8). The food groups were categorized as recommended by WHO in the IYCF guideline.¹³It was found that only 6.63% children were receiving four food groups. More than half of the children(58.4%) were consuming three food groups. 8.4% children were consuming four food groups, 32.5% children were consuming two food groups and very small number of children were consuming only one food group.

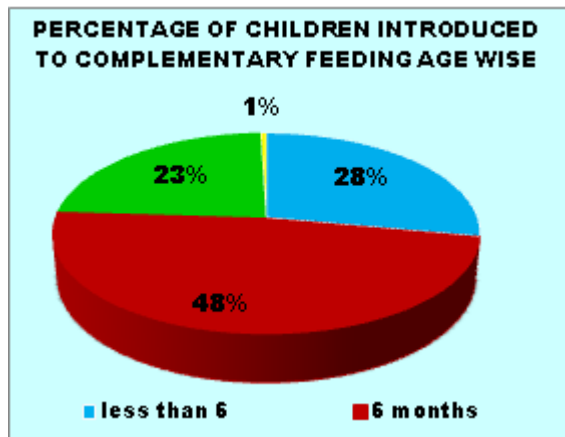


Figure 1: Age Wise Introduction of Complementary Feeding

Assessment of Nutritional status

Nearly 48.9% children in the slum were found to be stunted; 6.2% children were found to be severely wasted i.e. MUAC below 11.5cms.

Number of different food group intake among the children was compared to their nutritional status. Result shows that there is very strong evidence of relationship between nutritional status & the inclusion of number of food groups in complementary feeding of the children (Chi square=11.68, df=2, p<.003).

6. Discussion

This study provided data on socio demographic characteristic, breast feeding and complementary feeding practice prevalent in the urban slums of Raipur. The study explored the socio demographic factors related to breast feeding and complementary feeding. The exclusive breast feeding rate was satisfactory (79%) and predominant breast feeding rate was (20.9%) among all socio demographic categories. Exclusive breast feeding till 6 months of age and appropriate complementary foods from 180 days.¹⁴ Proper way of feeding child is also essential.

Continuous monitoring is required to promote the IYCF indicators, though breast feeding indicator in term of exclusive breast feeding is highly satisfactory but indicators like continued breast feeding along with complementary feeding is only 11.9%. Mothers and other caregivers need continuous support from community workers to understand and practice breast feeding till 2 years or beyond. Early complementary feeding i.e. feeding started at 5 months (150 days) should be discouraged, even though the percentage is too less but it should be discouraged for the benefit of child. Figure 2. Shows the number of children who were initiated complementary feeding on time and its relation to episodes of illness suffered by children.

Inclusion of locally and seasonally available food to make soft foods has been suggested by WHO. In the study 94.3% children were found to provide homemade family foods, no separate meal was prepared for the child. Mothers who prepared separate meals for their younger ones were serving either Khichdi or Dalia to their child. The diet was nutrient rich but monotonous for the child. Most caregivers were

practicing forced feeding. Mothers were not aware about the amount. Though they are aware but they avoid foods like egg and flesh food from child's diet. Lemon was almost avoided by all of the mothers due to myth. The prevalence of stunting is high; percentage of severe acute malnutrition is 6.8%. These percentages of malnutrition were attributed to substandard feeding practice. The severe malnourished cases require immediate management at facility based center. Early referral of the Severe Acute Malnourished children needs to be prioritized.

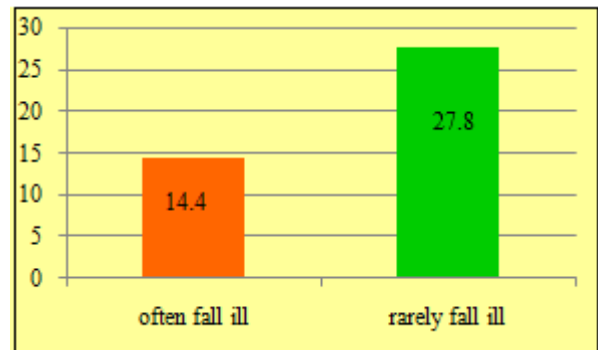


Figure 2: Children receiving proper complementary food and relation to episodes of diseases

Mother and child protection card should be maintained on regular basis, front line workers should be aware about the growth monitoring practices and counseling on same. Care givers about understanding the importance of child care till 36 months and weight gain as main indicator for child's health and nutrition. Children should be encouraged to eat take home ration provided by Anganwadi center.

7. Conclusion

The main strengths of the study is that for the first time a realistic scenario of the infant and young child feeding practice of slums were revealed. Behaviour change communication (BCC) should be prioritized. Most of the mothers and caregivers were having myth related to inclusion of food groups in child's complementary feeding. User friendly BCC materials / tools should be developed to educate the mother and other caregivers of the family.

8. Acknowledgements

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Conflicts of interest: none

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Author Profile

Sharmistha Roy is Research Scholar, Govt. Dudha Dhari Bajrang Girls' P.G. Autonomous College, Raipur (C.G.)

Dr Aruna Palta is PRINCIPAL, Dr. Radha Bai Govt. Naveen Kanya Mahavidyalaya, Raipur (C.G.). In the field of nutrition since last 35 years published 60 research papers in national and international journals, 17 books and 20 PhDs.