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Original Research Article

Complimentary feeding practices in rural areas of Telangana

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ABSTRACT

Introduction: Infant feeding practices are critical determinants of survival, growth and development during infancy. Breast feeding is required for child survival, birth spacing and prevention of childhood infections. Complementary feeding is essential from six months of age while continuing breast feeding to meet the needs of the growing baby.
Objective: To study the existing practices of complementary feeding and assess the knowledge and practice gap. Study design: Hospital based, cross-sectional, descriptive study. Setting: In a tertiary care teaching hospital of rural Telangana.
Participants: Total 140 mothers with children in the age group of 6-23 months of age.
Materials and Methods: Participants were randomly selected after informed consent. Data regarding currently following complementary feeding practices was collected in the predesigned, semi-structured questionnaire and analyzed.
Results: Only 56.4% of mothers in the current study initiated feeds at recommended time. Demand feeding was practiced by only 53%. A detailed analysis on the practice of clean feeding methods showed only 37.1% followed cleaning of hands before feeding. Only 28.6% have gained knowledge on infant feeding practices from a qualified person. A majoirty of them followed cultural practices (23.6%) and advices from friends and relatives (40%). Thus, Information, Health education and Communication activities are required to improve breast feeding and weaning practices especially among the low-socio-economic and rural groups.
Conclusions: A detailed analysis on the practice of clean feeding methods showed only 37.1% followed cleaning of hands before feeding. Since good complimentary feeding practices helps in the overall growth and development of child, there should be renewed focus on public health education regarding this in the form of advisory to new parents while discharge from the hospital, regular advisories from community health care workers in the rural areas to the parents.

1. Introduction

The transition from exclusive breastfeeding (EBF) to family foods referred to as complementary feeding (CF) typically covers the period from 6 to 18-23 months of age and is very vulnerable period. It is the time when malnutrition starts in many infants contributing significantly to the high prevalence of malnutrition in children under five years of age world- wide. WHO estimates that 2 out of 5 children are stunted in low-income countries.[1] Complementary feeding is described as the introduction of safe and nutritionally-balanced solid, semi-solid or soft foods in addition to breast milk for children aged 6–23 months.[2] Appropriate complementary feeding has been linked to optimal childhood nutrition. However, inappropriate complementary feeding practices remain an

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important aetiology for childhood under nutrition, a major source of disease burden among children under 2 years of age in many developing countries, including India.[1,3]

Complementary feeds should be timely, adequate, safe and properly fed.[4] Optimal Infant and Young Child Feeding (IYCF) Practices recommend age appropriate CF for children of 6-23 months of age, while continuing breast feeding. According to IYCF children should receive food from 4 or more food groups.[1] Grains, roots, and tubers, legumes and nuts, 2. Dairy products, 3.Flesh foods (meat, fish, poultry), 4. Eggs 5. Vitamin A rich fruits and vegetables; 6. Other fruits and vegetables] and fed for a minimum number of times i.e., 2 times for breast fed infants 6-8 months, 3 times for breast fed children 9-23 months; 4 times for non-breast fed children of 6-23 months. It also said adequate total energy intake can also be ensured by addition of one to two nutritious snacks between the 3 main meals and should not replace meals.[4]

Appropriate complementary feeding is not only essential for child growth but also provides the foundations required for good health throughout life.[2] Evidence from South Asia suggests that there are wide disparities in complementary feeding practices. For example, India had the lowest proportion of children (15%) who met the minimum dietary diversity (MDD), followed by Nepal (34%) and Bangladesh (42%), while the highest proportion of children who met the MDD was in Sri Lanka (71%).[5] The study also indicated that India had the lowest percentage of minimum acceptable diet (MAD, 9%) among breastfed children compared with Sri Lankan (68%), Bangladeshi (40%) and Nepalese (32%) children.[6,7] Although India has taken various steps (e.g., the implementation of the Integrated Child Development Scheme[2] and Anganwadi Services Scheme[6]) to improve the nutritional status of children, evidence suggests that appropriate complementary feeding practices remain low.[8,9] This indicates the need for additional studies to examine why complementary feeding practices have not improved in the country especially in rural areas. Regular studies helps to identify the gaps in existing programs which inturn helps in effective implementation of the healthcare programs of the country.

2. Aims and Objectives

To assess the complimentary feeding practices in rural areas of Telangana.

3. Materials and Methods

This is a cross-sectional, descriptive, hospital based study. It was conducted in the department of Paediatrics, Dr.V.R.K.Women's Medical College, Telangana from September 2021 to December 2021. The study was approved by the Institutional ethics committee. No financial funding was procured from third party sources. Data regarding complementary feeding practices was collected in the predesigned, semi- structured questionnaire. Questions related to quality and qauntity of complimentary food and breast feeding was elicited using 24hour recall method. Questionnaire was administered by the authors. Adequacy of feeds was assessed according to WHO recommendations.[3] Analysis of the data was done using SPSS software version 19.0. Simple proportions were calculated for various indicators.

3.1. Inclusion criteria

140 mothers with infants and young children of 6-23 months age who attended our well baby clinics during the study period and willing to participate were included in the study.

3.2. Exclusion criteria

Children not accompanied by their mothers, those who were born as preterm, or IUGR or low birth weight(LBW), children with chronic illnesses and mothers who were not willing to participate in the study were excluded from the study.

4. Results

A total of 140 mothers with children of 6-23 months of age were included in the study. The socio- demographic profile of these subjects was shown in Tables 1 and 2 . Of the 140 children 79 (56%) were males, 61(44%) were females. There were 42(30%) subjects in 6-8 months of age, 39(28%) were in 9-11 months of age, 59(59%) in 12-23 months of age family. 71(50.7%) mothers and 58(41.4%) fathers had an education of below 10th grade/class. Majority of study subjects 63(45%) belong to upper lower (class iv), and 45(32%) to lower middle (class III) and 32(23%) to upper middle (class II) as per Modified Kuppuswamy's Socio-economic Scale.

Table 1: Socio - demographic Profile (n-140)

Variables	**f(%)**
Male:	79(56%)
Female:	61(44%)
Age:	
6-8 months:	42(30%)
9-11 months:	39(28%)
12-23 months:	59(42%)

Source of Knowledge (Table 3): Mothers (140) who participated in the study were questioned regarding their source of knowledge regarding breast feeding and complimentary feeding practices. 33(23.6%) of the mothers said they followed age-old cultural practices prevelant in the society and 11(7.8%) of the mothers said they gained knowledge from the media sources (print, digital, mulimedia). A majority of them, 56(40%) of them told that

Table 2: Socio-demographic Profile (n-140)

Literacy of the Mother:	
Educated (10th grade pass or more)	69(49.3%)
Not Educated (<10th grade)	71(50.7%)
Literacy of the Father:	
Educated (10th grade pass or more)	82(58.6%)
Not Educated (< 10th grade)	58(41.4%)
Socio-Economic Status:	
Upper Lower	63(45%)
Lower Middle	45(32%)
Upper Middle	32(23%)

they listened to their friends and relatives advice. Only 40 mothers (28.6%) of the 140 mothers in the study told they got their information from a qualified person (doctor, nurse, healthcare workers).

Table 3: Source of Knowledge (n-140)

Variable	**f(%)**
Cultural Practices	33(23.6%)
Relatives/Friends	56(40%)
Media	11(7.8%)
Qualified Persons	40(28.6%)

Feeding Practices (Table 4): In the study population 79(56.45) mothers have initiated CF at the right time and others who were continuing mixed feeding(breast milk and buffallo/cow milk) at the time of interview, they were were counseled regarding CF and apporpriate feeding practices.132(94.3%) of mothers were still continuing EBF for > 6 months. Demand feeding was practiced by only half percentage of the study population. Age appropraite feeds were given by upto 89% of the mothers of the study population. However only 52(37.1%) of the mothers followed proper hygenic methods while feeding the babies, they were counselled regarding the same.

Table 4: (n -140)

Continued Breast feeding	132 (94.3%)
Complimentary feeding	113 (80.7%)
Initiation of Complimentary Feeding at 6 months	79 (56.4%)
Demand Feeding	74 (53%)
Cleaning of Hands before feeding the baby	52 (37.1%)
Giving age-appropriate feeds	125(89.3%)

Statistical analysis revealed time of initiation of CF was significantly co-related to mother's educational status and father's educational status with p< 0.05 (0.000) in both the cases. Socio-economic status also showed an impact with p< 0.05 (0.014). Educational status mother, father, and their socio-economic status showed a significant correlation to quality of food as well with p< 0.05 (0.001,0.001,0008 respectively).

5. Discussion

In the present study 56.4% of mothers started complementary feeding at the recommended time. In the study of Aggarwal et al[10] from Delhi it was much lower i.e., 17.5% had started at recommended time and a study from Delhi slums also reported[11] a small proportion i.e., 16.6% at the recommended age. This difference could be due to the cultural belief of starting of solids at 7 months as a ritual in this area. But in a study done by Vartika Saxena from Rishikesh[12] it was much higher i.e., 70.1% of mothers started at right time. But their study was done in the community. Another study from urban slum, Kolkata also reported 71.66%.[13] S. Rao et al study from Udupi and Mangalore[14] observed 77.5% but in their study literate mothers constituted more proportion.

Delayed CF: In the current study 43.6% of mothers had initiated CF after 6 months and not consistent with Rishikesh study where it was much lower (13%) and But in Delhi study it was high 70%. Aggarwal at el study also reported it 77% much higher than present report. In the present study reason was knowledge gap. This stresses the need to intensify the educational programmes of IYCF practices with a new approach and with a focus on rural population.

Quantity & Frequency: In the current study 89.3% of mothers were giving age appropriate feeds. But only 25.5% of mothers were giving feeds at recommended frequency and it is much lower than Rishikesh study[12] who reported 65%. And in Aggarwal's study[10] it was only 39.3%. As the present study was done in rural based back ground the practice gap might be high.

Present study observed impact of parent's education and socio-economic status on complementary feeding practices. Similar observation reported in Aggarwal et al and S. Rao et al. However, very small proportion (28.6%) of mothers received knowledge of complementary feeding practices from qualified people. Utilizing the opportunities of immunization, and a more active role of community health care wokers - ASHA workers in spreading the knowledge of IYCF practices will improve complimentary feeding practices in rural areas.

6. Conclusion

Only 56.4% of mothers in the current study initiated feeds at recommended time. Demand feeding was practiced by only 53%. A detailed analysis on the practice of clean feeding methods showed only 37.1% followed cleaning of hands before feeding. Only 28.6% have gained knowledge on infant feeding practices from a qualified person. A majority of them followed cultural practices (23.6%) and advices from friends and relatives (40%). All these practices lead to improper diet practices and this in turn leads to malnutrition. Since good complimentary feeding practices helps in the

overall growth and development of child, there should be renewed focus on public health education regarding this in the form of advisory to new parents while discharge from the hospital, regular advisories from community health care workers in the rural areas to the parents.

7. Limitations

As the study data was collected using 24hour recall technique, recall bias may exist. This study was a hospital based study and the sample size was small, to understand the practices of feeding better a larger sample size and a community based study is required.

8. Acknowledgment

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9. Conflict of Interest

The authors declare no relevant conflicts of interest.

10. Source of Funding

None.

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