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Original Research Article

A Study on the Infant and Young Child Feeding Practices among Mothers in a Selected Rural Area of Kollam, Kerala

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ABSTRACT

Background: Suboptimal breastfeeding accounts for death of 1.4 million children every year. Of all proven preventive health and nutrition interventions, IYCF (infant and young child feeding practices) has the single greatest potential impact on child survival.

Objectives:

1. To assess the infant and young child feeding (IYCF) practices among mothers
2. To evaluate the various indicators of infant and young child feeding practices among the same group.
3. To impart knowledge about appropriate infant and child feeding practices to the mothers.

Materials And Methods: A community based cross-sectional study among mothers of children aged 0-23 months attending the Anganwadis in a selected area of the rural health centre of Travancore Medical College, Kollam. A pre-tested structured interview schedule was used for the purpose.

Analysis: Data was entered into Microsoft Excel and analyzed by SPSS version 16

Results: Out of 50 children studied more than half were females and most of them belonged to birth order less than 2.There was early initiation of breast feeding and exclusive breast feeding in 60% of children. Colostrum was given to 78% children. Only 32% were given prelacteal feeds. 83% of children in the 12-23 months age group were still breastfed. Iron rich food was given to only 52.1% children. All the children studied had Minimum Meal Frequency (MMF). Minimum Meal Diversity (MMD) and Minimum Acceptable Diet were observed in 91.3%.

Conclusion: It is clearly evident from our study that the IYCF indicators; core and optional indicators showed acceptable values.

Key words: IYCF, Anganwadi, Minimum meal frequency, Minimum Meal Diversity,Minimum acceptable diet.

INTRODUCTION

Worldwide, around 10.9 million children under the age of 5 years die every year, of which 2.4 million deaths occur in India alone. {1} Malnutrition underlies a majority of these under 5 deaths, 70% of which occur in the first year of life. Nearly 67% of the child deaths in India are due to the potentiating effects of malnutrition. {2} Suboptimal breastfeeding accounts for death of 1.4 million children every year. {3} Of all proven preventive health and nutrition interventions, IYCF has the single greatest potential impact on child survival. Optimal infant and young child-feeding practices are crucial for nutritional status, physical and mental growth, development, health, and ultimately the

survival of infants and young children. Infants aged 0-5 months who are not breastfed have 7-fold and 5-fold increased risks of death from diarrhea and pneumonia, respectively, compared with infants who are exclusively breastfed. {4} At the same age, nonexclusive rather than exclusive breastfeeding results in more than 2 fold increased risk of dying from diarrhea or pneumonia. {5}

India is home to more than a third of the world's undernourished children.In1999, the National Family Health Survey(NFHS II) found that 47% of all children under age three were under weight. {6} Data from NFHS-3 (2006) shows only a very small decline, with under-nutrition level remaining around 45 percent for children below three. {7} Despite vast improvements in the country's economy, undernutrition remains a challenge in India.

Most of the studies conducted in India have focused mainly on the breastfeeding aspects and not dietary diversity and diet frequency aspects which are important in IYCF .It was against this background that this study was conducted in a selected rural area of Kollam.

MATERIALS AND METHODS

A community based cross-sectional study was conducted in a rural setting of Kollam from Nov 2014 to Jan 2015. The study population included mothers of children 0-23 months attending the anganwadis under the field practice area of the rural training centre of Travancore Medical College, Kollam. The mothers attending the anganwadis were selected using systematic random sampling technique. The inclusion criteria included mothers of children aged 0- 23 months & exclusion criteria were those unwilling to cooperate with the study.

Data Collection: With due permission from the Principal TMC, Kollam, Professor and HOD, Community Medicine and with the Ethical committee approval, data was collected. A pre-tested, structured interview schedule based on the standard questionnaire on IYCF by WHO was used for the purpose. The data regarding the socio-demographic profile of the mothers and feeding pattern among the mothers regarding breast feeding, minimum meal frequency, minimum dietary diversity, minimum acceptable diet and the inclusion of various iron rich foods in the diet of the child was collected.

Analysis: Data was entered into Microsoft Excel and analyzed by SPSS software version 16.

RESULTS

The study was a rural community based one involving 50 children aged 0-2yrs out of which 46% were male children and 54% female children. 27 children (54%) belonged to 0-5months age group and 23 children (46%) belonged to 6-23 months category. Regarding the maternal literacy 16% were educated up to middle school, 20% till high school, 30% higher secondary, 28% were graduates and post graduates and 6% professionals. 46% were unemployed. 42% were skilled workers, 6% semi-professionals and 6% professionals.

Table 1: Age and Sex distribution of the study population

Sex	0-5 months	6-23 months	Total
Male	12 (24%)	11 (22%)	23 (46%)
Female	15 (30%)	12 (24%)	27 (54%)
Total	27 (54%)	23 (46%)	50 (100%)

Table 2: Maternal educational status

Education	frequency	Percentage (%)
Middle school	8	16
High school	10	20
Higher secondary	15	30
Graduate/post graduate	14	28
Profession	3	6
Total	50	100

Birth order was tabulated as birth order <2 and birth order of >2 and was found to be 62% and 38% respectively. 40% of children of birth order <2 belonged to age group 0-5 months and 22% to 6-23 months. 14% of children of birth order >2 belonged to age group 0-5 months and 24% were in the 6-23 months. In our study

60% of children were put on breastfeeding in the recommended time. Compared to other similar studies, ours was a quite high percentage. NFHS-3 data at national level and at Delhi showed EIBF as 23.4% and 21.7% respectively. In our study, pre-lacteal feeds were given to only 32% of children. This is less compared to similar study in Delhi (38%). {8} And even lesser compared to NFHS-3 data at Delhi (45.7%). {9} Water was the pre-lacteal feed to 54% of children and honey to 44%.

In our study 78% of children were given colostrum. Breast milk is a good source of all nutrients required for the baby in the initial few months of life. In our study, 60% of children were exclusively breast fed. Remaining 40% were premature infants who were provided with additional foods on their doctor's advice. Compared with other studies this is a high percentage, NFHS-3 data at national level and Delhi showed 46.4% and 34.5% respectively. Studies have proved that children who received solid and liquid foods along with breast milk are at increased risk of infectious disease under nutrition.

Table 3: Feeding practice indicators of the study population

Sl.no	Feeding practice indicators	Yes (%)	No (%)	Total
1.	Early initiation of breast feeding	30 (60%)	20 (40%)	50
2.	Prelacteal feeds	16 (32%)	34 (68%)	50
3.	Colostrum	39 (78%)	11 (22%)	50
4.	Exclusive breast feeding	30 (60%)	20 (40%)	50
5.	Bottle fed <6 months 6 – 23 months	 9 (18%) 13 (26%)	 18 (36%) 10 (20%)	 27 23
6.	Continued breast feeding 12-23 months	 15(83.3%)	 3(16.7%)	 18

In our study 78% of children were given colostrum. Breast milk is a good source of all nutrients required for the baby in the initial few months of life. In our study, 60% of children were exclusively breast fed. Remaining 40% were premature infants who were provided with additional foods on their doctor's advice. Compared with other studies this is a high percentage, NFHS-3 data at national level and Delhi showed 46.4% and 34.5% respectively. Studies have proved that children who received solid and liquid foods along with breast milk are at increased risk of infectious disease under nutrition.

Bottle feeding was observed in 44% of total children studied, out of which 18% were children aged less than 6 months and 26% were children aged 6-23 months. Other studies had reported lesser prevalence of bottle feeding than our study. A study from Delhi reported it to be 26.5%. {10}

Continued breastfeeding at 12-23 months was being observed in 83.3%. A study from Delhi showed that it was 72.1% and from West Bengal was 91.1%.

Minimum meal frequency was observed in 100% of children aged 6-23 months. In a study from Delhi, minimum meal frequency was observed in 48.6%children aged 6-23 months. NFHS-3 data from Delhi reported that only 55% of children are fed minimum number of times a day. {11}

Minimum dietary diversity was present in 91.3% of children aged 6-23 months. This is quite high compared to a study in Delhi showing only 32.6%. {12} This indicator evaluates whether the child is receiving a balanced diet or not. NFHS-3 data from Delhi has reported that only 48% are fed with appropriate number of food groups.

Minimum acceptable diet was found to be adequate in 91.3 % of children aged 6-23 months. Study from Delhi had it as low as 19.7%. This indicator is the proportion of children aged 6-23 months who receive at least the MDD as well as the MMF accordingly. NFHS-3 data from

Delhi showed that only 34% of children in Delhi had minimum acceptable diet.

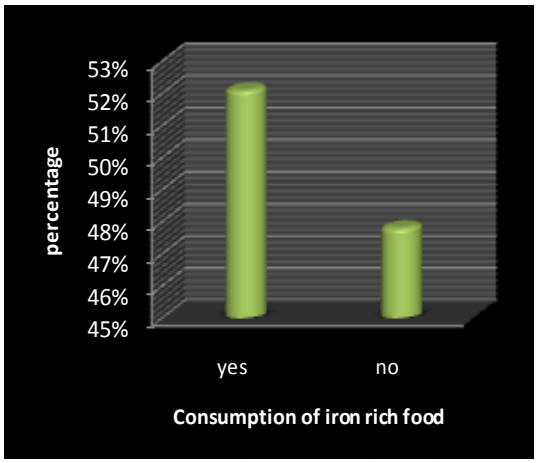

Figure1: Consumption of iron rich food of the study population

Table 4: IYCF indicators of the study population.

Sl.no	Indicators	Frequency
1.	Minimum meal frequency	23 (100%)
2.	Minimum dietary diversity	21 (91.3%)
3.	Minimum acceptable diet	21 (91.3%)

CONCLUSION

It is clearly evident from our study that the IYCF indicators; core and optional indicators showed acceptable values. Out of 50 children studied more than half were females and most of them belonged to birth order less than 2. All the mothers included in the study were literate and 64% were educated up to higher secondary. Regarding the IYCF indicators, early initiation of breast feeding and exclusive breast feeding was there in 60% of children. Colostrum was given to 78% children. Only 32% were administered prelacteals. 83% of children of 12-23 months age group were still breastfed. Iron rich food was given to only 52.1% children and this was the only parameter that was quite backward in our study. Its noticeable that all children studied had Minimum Meal Frequency (MMF). Minimum Meal Diversity (MMD) and Minimum Acceptable diet was observed in 91.3%. Comparing our study with other similar ones, the status of IYCF practices in our study was far better.

RECOMMENDATIONS

The following recommendations were made based on the results of our study:-

1. Early initiation of breastfeeding and exclusive breastfeeding was there only in 60% of children studied. Since breast milk is the best ever food available in this world, we recommend that these two be entertained by mothers at the right time and for right duration.
2. Consumption of iron rich food was there only in 52 % children of 12-23 months age group. So iron rich food like ragi, jaggery, dates, has to be included in their diet.
3. Colostrum is the first breast milk containing nutrients as well as immunoproteins essential for the baby. In our study only 78% were given colostrum. The mothers to be must be educated about the importance of colostrum administration in the antenatal period itself.
4. Our study stands out to be the latest evidence that the custom of prelacteal feeding still exist. So we insist that this practice be abandoned as it has nothing good for the baby rather harmful.

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