

A Study of Complementary Feeding Practices amongst Mothers of Children Aged Six Months to Two Years Attending an Immunisation Clinic

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ABSTRACT

Introduction: Infant and young child feeding indicators have been developed by the World Health Organization (WHO), to guide and monitor the feeding practices of young children. The World Health Organization (WHO) recommends exclusive breast feeding (EBF) for the first six months of life, with the addition of complementary feeds (CF) at six months with continued breast feeding until at least the age of two years. Study aimed to find out the complementary feeding practices amongst mothers of children aged six months to two years.

Material and Methods: A cross sectional study of complementary feeding practices amongst mothers of children aged six months to two years in an urban setting. Therefore a total of 154 subjects were taken into the study. The study was conducted from Jan 2014 – Sep 2015.

Result: Among the studied children, 59.7% were males and 40.3% were females. Almost more than half of the children were in the age groups of more than 9 months and only 18.2% were in the age group 6 – 8 months.

Conclusion: This study suggested that accurate information and education should be given to mothers and caregivers about appropriate breast-feeding and complementary feeding practices to prevent malnutrition and improve the health status of the children.

Keywords: Infant and Young Child, Complementary Feeding, Malnutrition

longer sufficient to meet all their nutritional requirements and complementary feeding should be started. Complementary feeds bridge the energy, vitamin A and iron gaps, which arise in breastfed infants at 6 months of age.⁶

Infant and young child feeding practices are multidimensional and age specific. Various inappropriate complementary feeding practices such as; early or delayed introduction of complementary food, improper feeding frequency and low dietary diversity of complementary foods have numerous negative effects on children's nutrition and health.⁷ Improper complementary feeding practices, can also lead to malnutrition, stunting, poor cognitive development, and significantly increased risk of infectious diseases such as diarrhoea and acute respiratory infection,^{4,7,8} accounting to increase in child mortality, which is still high in most of the developing countries. The *Lancet* Maternal and Child Under nutrition Series evaluated that sub-optimal breastfeeding practices are estimated to be responsible for more than a million child deaths and 44 million disability-adjusted life years (DALYs), which account for 10 percent of DALYs in children younger than 5 years.⁹ Study aimed to find out the complementary feeding practices amongst mothers of children aged six months to two years

MATERIAL AND METHODS

A cross sectional study of complementary feeding practices amongst mothers of children aged six months to two years in an urban setting. Therefore a total of 154 subjects were taken into the study.

INTRODUCTION

Infant and young child feeding (IYCF) practices, comprising of both breastfeeding and complementary feeding, is one of the most effective means to improve nutritional status and the survival of a child. An appropriate diet is critical in the growth and development of children especially in the first two years of life.¹ The period between birth and 2 years is widely recognized as a 'critical window period' or 'physiological vulnerable period', to support the rapid rate of physical growth and brain development.² These practices protect the child in all aspects i.e. nutritionally, immunologically, economically and psychologically during this critical period. Infant and young child feeding indicators have been developed by the World Health Organization (WHO), to guide and monitor the feeding practices of young children.³ The World Health Organization (WHO) recommends exclusive breast feeding (EBF) for the first six months of life, with the addition of complementary feeds (CF) at six months with continued breast feeding until at least the age of two years.^{4,5} After six months, breast milk (BM) alone is no

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| Age group (months) | Frequency | Percentage (%) |
|--------------------|------------------|----------------|
| 6-8 | 28 | 18.2 |
| 9-11 | 60 | 39 |
| 12-23 | 66 | 40.9 |
| Mean Age \pm SD | 12.25 \pm 4.52 | |
| Minimum age | 7 months | |
| Maximum Age | 23 months | |

Table-1: Age wise distribution of children (n=154)

| Gender of the child | Frequency | Percentage (%) |
|---------------------|-----------|----------------|
| Male | 92 | 59.7 |
| Female | 62 | 40.3 |
| Total | 154 | 100 |

Table-2: Distribution of children by gender

| Sl. No. | IYCF Indicators | Age group (n) | Percentage (%) |
|---------|--|-------------------|----------------|
| 1. | Children ever Breast Fed | 6-23 months (154) | 150 (97.4%) |
| 2. | Timely initiation of Breastfeeding | 6-23 months (154) | 84 (54.5%) |
| 3. | Exclusive Breast Feeding | 6-23 months (154) | 111 (72.1%) |
| 4. | Continued Breast feeding at 1 year | 12-15 months (24) | 22 (91.6%) |
| 5. | Continued Breast feeding at 2 years | 20-23 months (17) | 11 (64.7%) |
| 6. | Introduction to solids, semi solid or soft foods | 6-8 months (28) | 28 (100%) |
| 7. | Timely Complementary Feeding | 6-9 months (70) | 54 (77%) |
| 8. | Minimum Meal frequency | 6-23 months (154) | 125 (81.2%) |
| 9. | Minimum Dietary Diversity | 6-23 months (154) | 65 (42.2%) |
| 10. | Minimum Acceptable diet | 6-23 months (154) | 59 (38.3%) |
| 11. | Consumption of iron rich foods | 6-23 months (154) | 104 (67.5%) |
| 12. | Age appropriate feeding | 6-23 months (154) | 135 (87.7%) |
| 13. | Milk feeding frequency for non- breastfed children | 6-23 months (19) | 15 (78.9%) |
| 14. | Bottle feeding | 6-23 months (154) | 50 (32.5%) |

Table-3: Complementary feeding practices among Infant and young child feeding

Study Duration: The duration of study was over a period of one year.

Data collection: Data was collected in the following manner:-

- Written informed consent form and information sheet along with the demographic data was acquired.
- The remaining data was collected by interview method by the researcher by using a pretested pre- validated questionnaire.
- The study subjects were explained in detail about the purpose of the study and about methodology prior to data collection.

Exclusion and Inclusion Criteria: Mothers of children aged six months to two years, attending immunization clinic during the study period and mothers who were willing to participate in the study. Mothers of all children aged six months to two years who have had illness for which they consulted a health staff in last three weeks.

STATISTICAL ANALYSIS

Data entry was entered by researcher and analyzed using SPSS version 17 software. The data were analyzed with the help of bio-statistician extensively involved in health research.

RESULT

Almost more than half of the children were in the age groups of more than 9 months and only 18.2% were in the age group 6 – 8 months (table-1). Among the studied children, 59.7% were males and 40.3% were females (table-2). Mean and standard deviation of age among the children was found to be 12.25 \pm 4.52 months with minimum and maximum age of 7 months and 23 months respectively. This study found complementary feeding practices among Infant and young child feeding which is shown in table 3.

DISCUSSION

Infant and young child feeding (IYCF) practices include early initiation of breast feeding within one hour of life, timely introduction of solid/semi solid foods from the age of six months increasing in amount and frequency over time along with breast feeding as demanded by child. Under-nutrition and growth faltering is widely prevalent in India which relate not only to insufficient breastfeeding, but also to faulty complementary feeding practices. In contrast to the large literature on breast and formula feeding, relatively less attention has been paid to the complementary feeding period in India, the nature of the foods given, or to whether this period of significant dietary change influences later health

and development.¹⁰ Thus, this study was carried out to assess the knowledge of mothers regarding complementary feeding to evaluate the practices of complementary feeding and to determine the factors influencing the inappropriateness of complementary feeding. The study revealed that most of the mothers were well equipped with the knowledge of breast feeding and complementary feeding but ideal practices being carried out by them were found to be very low.

Almost more than half of the children were in the age groups of more than 9 months and only 18.2% were in the age group 6 – 8 months. The age distribution seemed satisfactory as all age groups were included in the study.

It was observed that male children (59.7%) outnumbered the female children (40.3%) in our study. It may be due to our cultural influence as more emphasis is being given to male children and family members seek medical care earlier for male than female children.

More than 80% of the mothers knew that complementary feeding should be initiated at 6 months. However, a previous study conducted in Delhi, showed different result where only 46% of mothers had the knowledge that weaning should be started by 6 months.¹ About 72% in our study population correctly started complementary feeds to their at 6-7 months which is not comparable to previous studies done by Monish Chaturvaedi et al in Agra (20%)¹¹ and Anju Aggarwal et al in Delhi (17.5%).¹ Increased knowledge related to complementary feeding initiation would have contributed to the better practice of CF initiation among mothers in our study.

About 11% of mothers felt that complementary feeding should be initiated before 6 months while 7.8% and 9.7% of the mothers initiated complementary feeding early at less than 4 months and 4-5 months respectively. Our study findings were inconsistent to a study conducted by Senegal by Gupta et al¹², where about 85% of the children were introduced to water in the first 3 months of life and majority (62%) were given complementary foods earlier than 6 months. Our study showed better results when compared to previous community based cross sectional study conducted in Eastern Uganda¹³, which found that 30% of the infants were given other foods in addition to breast milk before 6 months. This variation in our study might be due to hospital based group of our study population. There can be various reasons for early breast-feeding cessation leading to early complementary feeding initiation. They are lactational factors, psychosocial factors, lifestyle related factors, nutritional factors, medical and self-weaning factors.¹⁴ After interviewing the respondents, it was found that the major reasons were inadequacy of breast milk secretion (61.3%) followed by mother's perception that breast milk could not fulfil the nutritional requirement of the child up to 6 months (28.7%). The results were similar to a study conducted by Sriram et al in India, who demonstrated that the most common reason of stopping breast feeding early was inadequate milk secretion (54.67%), irrespective of the time of breast-feeding cessation.¹⁵ There are many other studies, which have obtained similar reasons for early weaning.^{1,16-17} In this study, less than 5% of the mothers felt that

complementary feeding should be initiated beyond 6 months. However, 10.4% mothers delayed initiation of complementary feeding beyond 7 months. Our result was better when compared to the previous studies conducted in Bidar (42.2%) by Paheli report¹⁸, in tribal population of Mysore (48%) by B. Dakshayani et al¹⁹, in Allahabad (48.3%) by Dinesh et al²⁰ and in Delhi (52%) by Anju agarwal et al.¹ and India (58.8%) as per NFHS-3 data. This variability could be due to better knowledge and increased awareness among mothers of our study population about problems related to delayed weaning and feeding practices.

CONCLUSION

Time of complementary feeding initiation varied according child's gender, predominant caregiver of the child, mother's parity and socio economic status of the family, which were found to be statistically significant.

Hence it is essential, that accurate information and education should be given to mothers and caregivers about appropriate breast-feeding and complementary feeding practices to prevent malnutrition and improve the health status of the children.

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