

Original Research Article

Infant and young child feeding guidelines: awareness amongst mothers and practices followed

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ABSTRACT

Background: Globally if the exclusive breast feeding is adopted there is up to 15% reduction in the mortality of under five children. At the same time proper “complementary feeding practices” leads to up to 10% more decrease in the mortality rates. The objective of this study was to study the infant and young child feeding practices among mothers

Methods: This was an observational study, conducted at Aditya Hospital, Hyderabad in the period duration of 2012-2013. All children upto 24 months of life and their mothers were included in the study.

Results: Most common reasons given by the mothers were pain in the stitches and discomfort and anesthesia effect due to lower segment caesarean section (LSCS) (70%). it was found that there was no significant correlation between education status of mother and time of initiation of breast feeding ($P=0.6$). it was found that there was no statistical significance between giving of pre-lacteals according to educational status of mothers. Almost 60% ($n=64$) of the mothers were appropriate in starting complementary foods at the age of 6 months.

Conclusions: Women need to be educated separately with knowledge regarding of appropriate feeding practices so that both mothers and babies benefit from it; leading further to a healthy nation.

Keywords: Breast feeding, Complementary foods, Mother, Practices

INTRODUCTION

Breast feeding has many advantages. An essential component of breast milk is taurine. It plays an important role in neuronal growth of an individual, conjugation of bile and function of retina.¹

Breast milk contains many important nutrients and factors which promote proper development, and is better than the cow's milk.²

A study found that the exclusively breast-fed children for a period of up to six months had better growth and development parameters compared to their counterparts

who were not given exclusive breast feeding for such a period.³

The history suggests that giving top feeding to the children started from 1880 when they were given cow's milk. From 1956, due to rise in artificial feeding for children, efforts were directed to promote the importance of breast feeding.⁴

From 1974 onwards, international attention was attracted towards importance of breast feeding. International Code of Marketing of Breast-milk Substitutes and subsequent relevant Health Assembly resolutions. The Code was adopted by WHO member states in 1981 in response to the realization that wide-spread marketing of breast-milk

substitutes was leading to adverse health outcomes in infant and young children all over the world. Progress in the implementation of the code is reported every alternate year in the World Health Assembly (WHA), and through this process, a series of resolutions to further clarify the code have been adopted by WHO member states.⁵

The Baby-friendly Hospital Initiative (BFHI) was launched by WHO and UNICEF in 1992 with the aim of transforming maternity facilities to provide this standard of care.⁶

A large number of NGOs on national and international level came forward to promote breast feeding. Their efforts were directed and led by World Health Organization and UNICEF. They jointly formulated the recommendation in infant and young child feeding.⁷

Globally if the exclusive breast feeding is adopted there is up to 15% reduction in the mortality of under-five children. At the same time proper complementary feeding practices leads to up to 10% more decrease in the mortality rates.⁸

Hence present study was conducted to study the infant and young child feeding practices among mothers.

METHODS

Inclusion criteria

All children of age 0-24 months of age admitted in ward were included in the study. Babies along with their mothers were included in the study.

Exclusion criteria

- Children with low birth weight (preterm or IUGR)
- Children with whom accompanying mothers were not available.

Methods

This was a cross sectional study; conducted at Aditya Hospital, Hyderabad in the period duration of 2012-2013.

All children upto 24 months of age and their mothers were included in the study.

Sampling method

As this study focuses on different parameters and varied conclusions, multiple parameters were taken into account for sample size calculation.

In India, prevalence of exclusive breast feeding till 5 months of age according to NFHS3 data was 46%, and it is 62.7% in Andhra Pradesh.⁹ Taking into account this prevalence rates, with 95% confidence interval and

relative precision rate of 20% (which is minimum) the expected sample size was estimated to be 56.

$$N = (C. I.)^2 \times (1-p) / p \times \epsilon^2$$

Where,

n= required sample size,

C. I. = 95% confidence interval i.e. 1.96

p = prevalence of that variable

ε = relative precision rate

Prevalence of early initiation of breast feeding within one hour of birth according to NFHS3 data for Andhra Pradesh was 22.4%. Considering this figure with 95% confidence interval and relative precision rate of 25%, sample size was estimated to be 217.

Taking into account, all these facts and considerations, a sample of 217, with a dropout rate of 10%, a total of 229 was decided.

Considering an average admission rate of about 75 per month in the, a study period of 6 months from August 2012 to January 2013 was chosen; and all serial ward admissions in this period were being taken into account.

Methodology

A proforma was made which include the basic bio data of the child including his name, age and sex along with educational status of the mother of the child.

The proforma also contained the pre-structured questionnaire which was prepared on the basis of national infant and young child feeding guidelines.

Mothers were interviewed on the basis of this pre-formed questionnaire. Based upon this questionnaire, mothers were interviewed regarding the knowledge about breast feeding and complementary feeding they have, and the actual practices followed by them were looked for.

Student t-test and ANOVA were used to find the statistical analysis of the data using the Windostat software version 9.2.

RESULTS

65 mothers initiated breast feeding immediately after birth.

Most common reasons for delayed initiation of breast feeding given by the mothers were pain in the stitches and discomfort and anesthesia effect due to lower segment caesarean section (LSCS) (70%).

Others included no milk in the initial few days, grandmother's advice, baby not taking, not remembering, etc.

Out of the study population, 7 non-graduate mothers initiated breast feeding within an hour after birth, as against 5 mothers in graduate category. Similarly, it was looked for initiation within 4 hours, on 1st day and after 1st day (vide infra). Using the students' 't' test for statistics, 95% confidence limits and standard error of 0.15, it was found that there was no significant correlation between education status of mother and time of initiation of breast feeding ($P = 0.6$).

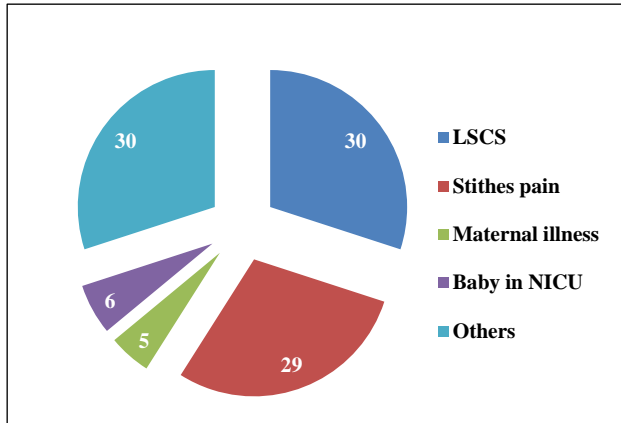


Figure 1: Reasons for delayed initiation of breast feeding.

Using 't' test for analysis with 95% confidence levels, it was found that there was no statistical significance between giving of pre-lacteal according to educational status of mothers ($p=0.36$).

Table 1: Initiation of breast feeding and education of mothers.

Time of initiation of breast-feeds	Non-graduate	Graduate
Within 1 hour	7	5
Within 4 hours	24	14
On 1 st day	27	13
After 1 st day	43	32

Table 2: Pre-lacteal and education of mothers.

Whether Pre-lacteal given	Mothers Non-graduate	Mothers graduate
Yes	37	28
No	64	36

Exclusive breast feeding till 6 months of age was practiced among 64.24% of mothers ($n=106$). The mean age of exclusive breast feeding was 5.9 months with a standard deviation of 2.11.

Almost 60% ($n=64$) of the mothers were appropriate in starting complementary foods at the age of 6 months, 14.2% ($n=20$) were late in starting complementary feeding for their children after 6 months; and 25.8%

($n=36$) started complementary feeding before the age of 6 months.

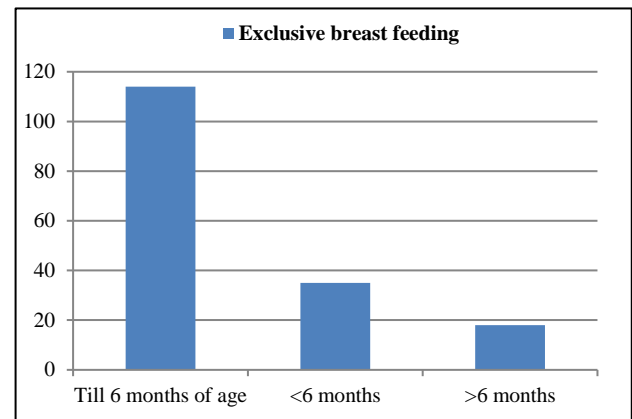


Figure 2: Exclusive breast feeding.

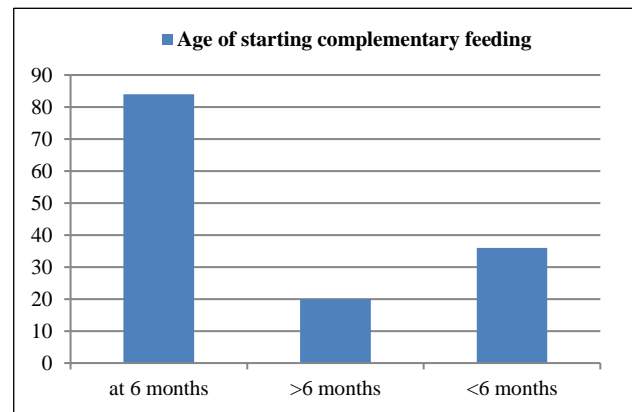


Figure 3: Age of starting complementary feeding.

Prevalence of bottle feeding was around 58.2%. Out of 165 mothers, 96 were using bottle for feeding instead of or along with direct breast feeding.

Table 3: Bottle feeding and frequent infections.

Bottle fed	Frequent respiratory illnesses		Frequent g.i.t illnesses	
	Yes	No	Yes	No
Yes	7	89	16	80
No	5	64	9	60
Total	12	153	25	140

Using the ANOVA test for correlation, with 95% confidence levels it was found that there was no difference in prevalence of repeated infections and use of bottles for feeding ($p = 0.26$).

DISCUSSION

Overall prevalence of breast feeding was almost universal (98.2%; $n = 163$). As per recommendations, initiation of breast feeding within 1 hr of life was practiced amongst

7.2% of the mothers (n=12). Similar to the findings of the present study, Chhabra et al observed the time interval between birth and first breastfeed was less than 1 hour in only 10% of the infants.⁷ As against the national data from NFHS-3, initiation was within one hour in 22.4% of mothers.⁹ One of the factors for discrepancy might be the type of population included in our study which was mainly urban. These results were much contradictory to the findings found in following study that included mainly the hospital delivered babies in their study. Chandrasekhar et al reported 59% initiated within one hour.¹⁰ Initiation within 4 hours of life was seen among 21.8% of mothers (n=36), and that on 1st day in 23.6% of mothers (n=39). Thereafter, initiation of breast feeding was variable, ranging from 2nd day to 12th day of life. Calculated as a whole, 53% (n=48) mothers initiated direct breast feeds within 4 hours of life. Similar to the present study 58.9% initiated breastfeeding within 4 hours after birth.

Most commonly used pre-lacteal was the formula milk given in 50% of babies; most frequent reason being the inadequacy of mother's milk. Unlike the findings in the present study, the type of inaugural feeds given by the mothers revealed that more number of mothers preferred giving boiled water to the infant, accounting for 37.60%. Honey and boiled water was given in 10.97% and cow's milk and goat's milk in 9.1% of cases.¹¹ Chandrasekhar et al found 65% infants received pre-lacteal feeds.¹⁰ This difference in improvement regarding fall in prevalence of giving pre-lacteal in our study and older studies may be explained by around 10 years gap leading to better education and awareness among people.

Exclusive breast feeding till 6 months of age was practiced among 64.24% of mothers (n=106). The mean age of exclusive breast feeding was 5.9 months with a standard deviation of 2.11. Breast feeding exclusively even after the age of 6 months faces the child at the risk of malnutrition as body's demands are increased at this age and other more nutritive foods needs to be introduced to the baby. This was practiced by 10.9% of the mothers (n=18). Breast feeds has got its own advantages as mentioned earlier, and it is 'THE' sufficient food for the baby in the initial 6 months. However, it was found that prevalence of exclusive breast feeding for a lesser time period was found in many mothers. In about 21.2% of the mothers, exclusive breast feeding was practiced for less than 6 months (n=35). Nearly close to NFHS-3 data (for A.P.), which was 62%, present study finds result being 68% of babies were exclusively breast fed for 6 months. However, as our final sample size was insufficient; results for this parameter may not be extrapolated with national figures.⁹ Kasla et al, in 1995 reported exclusive breastfeeding was 59.8% at the end of three months.¹²

Almost 60% (n=64) of the mothers were appropriate in starting complementary foods at the age of 6 months, 14.2% (n=20) were late in starting complementary feeding for their children after 6 months; and 25.8%

(n=36) started complementary feeding before the age of 6 months. The mean age of starting complementary foods in our study was 5.9 months with a standard deviation of 1.3. Complementary foods given before 6 months do not result in improved growth but replace breast milk intake.

Prevalence of bottle feeding was around 58.2%. Out of 165 mothers, 96 were using bottle for feeding instead of or along with direct breast feeding. In India, as per WHO IYAF, prevalence of bottle feeding in India was 14%, in contradiction to our results where it is 58.2%.¹³

This major difference in prevalence may be attributed to the majority of urban population included in the study, with lack of awareness and blindly following the advertised practices of bottle feeding; without knowing the reasons and without knowing the ill effects such as nipple confusion, decreased breast feeding, risk of introduction of infection, dental caries, etc. Bottle feeding has become so prevalent that mothers think that it is but a normal practice to do.

When we asked the mothers regarding reason for using bottles, maximum (76% of them) told that they have not at all tried with spoon and that they were not aware of any other method else.

15% admitted that they have tried with spoon or palada but baby was not taking. Other reasons (9%) given by mothers were like working mother, neighbor's advice, maternal illnesses, using only for water, doctor's advice, etc

CONCLUSION

Awareness about breast feeding and weaning practices is poor among the mothers. Practices followed among them are inappropriate and inadequate. Practices followed among them are not in par with the national recommendations. Although majority of population was non-graduate, there was not much of difference in the feeding practices followed among the non-graduate and well-educated graduate and even post graduate mothers, stressing on the need of the time that formal curricular education is different; and that breast feeding, and complementary feeding education needs to be spread among general population.

This urges us to create more and strengthen the existing programmes which are being carried out presently to increase awareness about the proper feeding practices. Women need to be educated separately with knowledge regarding of appropriate feeding practices so that both mothers and babies benefit from it; leading further to a healthy nation.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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