

## KNOWLEDGE, ATTITUDE, PRACTICES AND MISCONCEPTIONS AMONG MOTHERS REGARDING COMPLEMENTARY FEEDING

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### ABSTRACT

**Background:** Till six months, breast feeding should be exclusive for the infant – complementary feeding should continue then after. Prelacteal feeding, complete extraneous feeding, untimely supplementation/ continuation of breastfeeding and inaccurate pattern/ quantity of complementary feeding are widespread malpractices.

**Aims & Objectives:** To assess the knowledge, attitude, practices and misconceptions among mothers regarding complementary feeding.

**Materials and Methods:** A cross sectional semi-structured survey was carried on 100 mothers attending the pediatric OPD of a private medical college. Mothers whose babies were admitted to the NICU, born premature or had major congenital malformations, were excluded from the study.

**Results:** Early feed (< 2 hours after birth) was just 4%. The commonest pre lacteal feed given was honey (33%) – another being sugar water (4%). Within starting 6 months, 31% mothers had given breast milk along with extraneous milk, while 2% mothers were giving only extraneous milk. 32 % mothers were giving complementary food < 3 times, while 12% were giving > 6 times. As complementary food, biscuit (32%) was nearly as popular as daliya (32%) or banana (31%). 12% mothers introduced complementary feeding before 6 months while another 14% didn't start it even after 6 months. The commonest complementary food used was infant formula (62%), followed by dal paani (52%). 37% mothers agreed to having given pre lacteal feeds.

**Conclusion:** Wide spread lacunae exist in knowledge of mothers regarding breast feeding and complementary feeding. Awareness needs to be generated regarding the importance of exclusive breast feeding, avoidance of pre lacteal feeds and the benefits of timely and appropriate complementary feeding.

**Key Words:** Exclusive Breast Feeding; Complementary Feeding; Pre Lacteal Feeding

### Introduction

Infant and Young child feeding (IYCF) has the greatest single potential impact on a child's growth and survival.<sup>[1]</sup> The 'Lancet child survival series' ranked the extraneous 15 preventive child survival interventions for their effectiveness in preventing 'under – five' mortality.

In the list, 'exclusive breast feeding up to six months' was ranked number one, while complementary feeding beyond six months of age was ranked at number three.<sup>[2]</sup> The infant and young feeding guideline, formulated by Indian academy of pediatrics (IAP) in 2010, has recommended exclusive breast feeding up to six months of age and complementary feeding after age of six months as essential interventions to achieve the Millennium Development Goals(MDG).<sup>[3]</sup>

Breast milk alone is enough to meet the nutritional needs of an infant up to the age of six months. After the age of six months, complementary feeding needs to be introduced in the diet of an infant, so as to help it meet the nutritional requirements. Inadequate complementary feeding lacking in quality and quantity can impair the

growth of a child. There are many myths and lacunae associated with perception of complementary feeding among mothers. With this background, this study was planned.<sup>[4]</sup>

### Materials and Methods

After a proper ethical approval from concerned authorities, and consent from the parents of the subjects, mothers of 100 infants in total, ranging between 6-12 months, visiting the pediatric OPD during the months of January to March 2014, were included in the study. A questionnaire, as shown in the table 1, which was originally devised in English and then translated into Hindi, was given to all the mothers. Mothers, whose babies were born premature, or were admitted to nursery for any reason, or had congenital malformations were excluded from the study.

### Results

As per table 2, within starting 6 months, 31% mothers had given breast milk along with extraneous milk, while 2% mothers were giving only extraneous milk. As per table 3, early feed (< 2 hours after birth) was just 4%.

**Table-1: Questionnaire cum survey form**

No.	Content
1.	Name of Mother:
2.	Age:
3.	Educational Qualification: a. Matriculate b. Graduate c. Post graduate
4.	Did you ever breast feed your child at all? a. Yes b. No
5.	When did you first breast feed your child: a. Immediately after birth. B. Within six hours of birth. C. After six hrs but within twenty four hours.
6.	Did You give any pre lacteal feed a. Yes b. No. If Yes, please specify.
7.	Till what age did you exclusively breast feed the child:
8.	Have you ever fed the child with a bottle a. Yes b. No
9.	At what age did you initiate complementary feeding: a. Before six months b. Between the age of six and twelve months. c. Haven't started yet
10.	Do you have separate utensils for preparing the meals of your baby: a. Yes b. No
11.	Type of complementary feed a. Commercial Formula b. biscuits c. daliya d. juice e. halwaf.khichdi g. kheer h. banana i. fruits j. Rice water, Dal water. k soup
12.	No of times complementary feeding was given a. less than three times b. between three and six times c. more than six times

**Table-2: Feeding Characteristics**

Characteristics	Percentage
Exclusively Breast feeding	67
Mixed feeding	31
Never fed breast milk	02

**Table-3: Timing of first feed after birth**

Timing of first Feed	Number of Mothers
Immediately after birth	04
Within six hours of birth	67
After six but within twenty four hours	29

**Table-4: Characteristics of Pre lacteal Feed**

Type of Pre lacteal feed	No. of mothers who had given
Honey	33
Sugar water	04

**Table-5: Age at which Complementary Feeding was introduced**

Age of starting of complementary feeding	No. of Mothers
Before six months	12
Between six and twelve months	74
Haven't started yet	14

**Table-6: Type of Complementary Food**

Type of complementary feed	Number
Commercial formula	62
Rice Water, Dal water	52
Biscuits	32
Khichdi	32
Banana	31
Daliya	24
Kheer	13
Fruits	12
Juice	11
Soup	11
Halwa	7

**Table-7: Frequency of Complementary feeding**

Frequency of Complementary Feed	Frequency
< 3 times/day	32
3- 6 times/day	56
> 6 times/day	12

As per table 4, the commonest pre lacteal feed given was honey (33%) – another being sugar water (4%). As per table 5, 12% mothers started complementary foods early

and, on the other hands, 14% mothers delayed it to the excess. Two mothers had never breast fed their child – one was elderly gravida and the other had lactation failure. The commonest extraneous milk given was cow's milk.

As per table 6, among complementary food, biscuit (32%) was nearly as popular as daliya (32%) or banana (31%). The commonest complementary food used was infant formula (62%), followed by dal paani (52%). As per table 7, 32 % mothers were giving complementary food < 3 times, while 12% were giving > 6 times.

## Discussion

It has been established that early breast feeding (<2 hours after birth) may indeed have an advantage in reducing serum bilirubin levels, raising blood sugar, and increasing liver glycogen reserves.

Early breast feeding is also associated with less weight loss and earlier regain of birth weight.<sup>[10]</sup> But, nearly all (96%) mothers didn't follow it – mostly due to ignorance about the importance of early onset breastfeeding.

Against the practice in more than 1/3<sup>rd</sup> population, prelacteal feed is also ideally contra-indicated in any form and known to increase child mortality.<sup>[11]</sup> A study by Harnagle et al have also found that 26% of mothers agreed to having given a prelacteal feed.<sup>[8]</sup> More awareness needs to be created regarding this harmful practice.

Even the practice of supplementary food before 6 months of age is against the recommendation of exclusive breastfeeding up to 6 months.<sup>[11]</sup> Again on this count, 1/3<sup>rd</sup> of participants failed to comply. On being asked as to why they had given extraneous milk, the commonest response was that the mothers felt their milk production wasn't enough and the baby was remaining hungry.

The study reveals that wide knowledge gaps existed among mothers regarding complementary feeding. Indian academy of pediatrics (IAP) recommends exclusive breast feeding till the age of six months and complementary feeding to be introduced after the age of six months.<sup>[3]</sup>

The present study has demonstrated that 74% mothers had introduced complementary feeding at the right age, whereas 12% mothers had started complementary

feeding earlier. 24% mothers hadn't started complementary feeding by the time of interview, even after completion of 6 months. In a study by Lodha et al, the percentage of mothers introducing complementary feeding after 6 months was 76%.<sup>[5]</sup>

Passi Gouri et.al have found a higher rate of malnutrition among children who were exclusively breast fed and complementary feeds was not introduced at the right age.<sup>[6]</sup> Vaahetra et al found that breast milk alone was not sufficient to satisfy the nutritional needs of infants in Malawi beyond six months.<sup>[7]</sup>

In the present study formula feed along with dal and rice water were the commonest complementary feeds used. The higher percentage of mothers using commercial formula as complementary feeding could be attributed to the influence of media in promoting such products along with the ease of preparation.

Lodha et al have also found biscuits and commercial formula as the most widely used items for complementary feeding.<sup>[5]</sup> It is a common practice to give dal water and rice water as complementary food. A study by Dhingra et al found that 64% of mothers used dal water as type of weaning food.<sup>[9]</sup> Though dal and rice water are liquid in consistency, they are easy to digest, but may be deficient in calories and proteins at the same time.

Commercial infant foods may be energy-dense but lack micronutrients which are essential to the growth of the infant, apart from being expensive. IAP recommends complementary foods which are easily available, affordable and digestible. IAP recommends three to five servings of complementary feeding every day to infants. But in our study, about one third mothers were not giving the complementary feeds in this correct frequency.

## Conclusion

To conclude, appropriate nutrition during the first year of life lays the foundation of a healthy adult. Serious

lacunae occur in the knowledge of mothers regarding complementary feeding, types of food, duration etc. It is a case of missed opportunity, as mothers attending antenatal and well-baby clinics are hardly given any information regarding complementary feeding.

There is dearth of information for mothers regarding the type of complementary food, quantity, frequency etc. to be given. One limitation of our study is that the sample size was small, studies involving larger samples are needed so as to find out awareness among mothers regarding complementary feeding.

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Bhatia Ravi (RB) designed the study, drafted the manuscript. Ujjwala Jain (UJ) helped in procurement of data and in final design. RB would act as the guarantor. The authors have no financial interests to declare.

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