Section: Miscellaneous

Original Research Article

PRACTICES OF BREAST FEEDING AND COMPLIMENTARY FEEDING AMONG MOTHERS OF CHILDREN AGED 6 MONTHS TO 2 YEARS

Chandni Gupta[1], Shalija Kotwal[2], Anmol Khajuria[3], Sandeepa Bailam[4]

[1]*Assistant Professor Department of Community Medicine, Acharya Shri Chander College of Medical Sciences and Hospital, India.*
[2]*Assistant Professor Department of Pathology, Acharya Shri Chander College of Medical Sciences and Hospital, India.*
[3]*PG Resident Department of Pediatrics, Acharya Shri Chander College of Medical Sciences and Hospital, India.*
[4]*Assistant Professor, Department of Community Medicine, Acharya Shri Chander College of Medical Sciences and Hospital, India.*

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Corresponding Author:
Dr. SandeepaBailam,
Assistant Professor, Department of Community Medicine, Acharya Shri Chander College of Medical Sciences and Hospital, India.
Email: deepikabadkur@gmail.com

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ABSTRACT

Background: To assess breast feeding and complimentary feeding practices of mothers of children aged 6 months to 2 years.

Materials and Methods: A community based cross sectional study design was used for the survey. A house to house survey was done to collect the required data from the participants using a predesigned, pretested semi structured questionnaire. All women with children 6 to 24 months of age, residing in the study areas & giving informed verbal consent were eligible to participate in the study Data pertaining to socio-demographic profile, infants details, maternal details, information regarding breastfeeding practices, and initiation of complementary feeding was collected from the participants.

Results: 77.5% mothers had started complementary feeding at the recommended time of six months. The association of initiation of complementary feeding with socio-economic status, birth order, place of delivery and maternal education was found to be statistically significant. 40%mother gave prelactal feed. The association of socio-economicstatus, education levels of mother, working mothers etc were significant factors. In the upper middle class, 87.5% mothers had started complementary feeding at the recommended time.

Conclusion: The study has shown that a sizeable number of nursing mothers show poor adherence to WHO recommendations for breastfeeding and infants feeding practices. Intervention and further research should pay attention to factors such as cultural practices, access to and utilization of health care facilities, child feeding education and family planning. Further for properly following recommended breastfeeding practices there is necessity to promote mother's knowledge about breast feeding. Advice about breast feeding and complementary feeding during antenatal check-ups and postnatal visits might improve feeding practices.

Keywords: Family Planning, Breastfeeding Practices, Prelactal feed.

INTRODUCTION

Infant and young child feeding is a key area to improve child survival and promote healthy growth and development. The first 2 years of a child's life are particularly important, as optimal nutrition during this period lowers morbidity and mortality, reduces the risk of chronic disease, and fosters better development overall. Around the age of 6 months, an infant's need for energy and nutrients starts to exceed what is provided by breast milk, and complementary foods are necessary to meet those needs. An infant of this age is also developmentally ready for other foods. This transition is referred to as complementary feeding. This is when weaning begins. Weaning is the gradual process of introducing complementary foods to an infant's diet while continuing to breastfeed.[1,2]

Complementary feeding, if not done properly, can be followed by diarrhoea and months of growth

retardation leading to kwashiorkor, marasmus and immunodeficiency marked by recurrent and persistent infections which may be fatal. Inadequate food/nutrient intake is the major factor for malnutrition. Poor nutrition leads to underweight infants and stunting. Proper breast feeding and complementary feeding practices can prevent under five mortalities by 19%. Appropriate complementary feeding depends on accurate information and skilled support from the family, community and healthcare system. Inadequate knowledge about appropriate food and feeding practices is often a greater determinant of malnutrition than the lack of food. Knowledge of mothers about these factors will be of help in planning interventions to improve feeding practices. It has been shown in many studies that mothers in India are unable to start complementary feeding at the right time.[3,4]

Early initiation of transition to semi-solid/solid diet is correlated with high risk of food allergy, skin diseases like eczema and gastroenteritis. nutritional deficiencies and failure to grow has also been observed if the complementary feeding is continued beyond the recommended duration of weaning. As per WHO's "Global Target 2025" by making people enlightened of exclusive breastfeeding and the start of weaning between six to 24 months of age, will reduce the stunting by 40% in children below the age of 5 years. The practice of breastfeeding among Indian mothers is almost universal, but initiation of breastfeeding is quite late and the colostrum is usually discarded. Breastfeeding practices in rural communities are shaped by their beliefs, which are influenced by social, cultural, and economic factors. Continuous vigilance over infant feeding practices in the community is necessary for timely interventions, to ensure optimal growth and development.[5,6]

This research is undertaken to evaluate breast feeding & weaning or complimentary feeding practices of mothers in rural areas that will help to spread the awareness about feeding practices and can help device strategies to decrease the mortality& morbidity rate of children due to faulty feeding practices.

MATERIAL AND METHODS

A community based cross sectional study design was used for the survey to collect the required data from the participants using a predesigned, pretested semi structured questionnaire. All women with children 6 to 24 months of age, residing in the study areas & giving informed verbal consent were eligible to participate in the study. The questionnaire consisted of 26 items. It elicited information about demographic profile, breast feeding, initiation, and adequacy of complementary feeding. Data pertaining to socio-demographic profile, infants details, maternal details, information regarding breastfeeding practices, and initiation of complementary feeding was collected from the participants in their local comprehensible language via astructured questionnaire which was translated to hindi and back translated to english.

Complementary feeding: Complementary feeding is defined as the process starting when breast milk alone is no longer sufficient to meet the nutritional requirements of infants, and therefore other foods and liquids are needed, along with breast milk. Recommended time of initiation of complementary feed: Introduce complementary food at six months of age (180 days) while continuing to breastfeed. Amount of complementary food needed: Start at six months of age with small amounts of food and increase the quantity as the child gets older, while maintaining frequent breastfeeding.

Recommended meal frequency: The appropriate number of meals of complementary foods should be provided 2-3 times per day at 6-8 months of age and 3-4 times per day at 9-11 and 12-24 months of age. Time of initiation of complementary feed by the mother was compared with the recommended time of six months to decide if the feed in the child was early, at recommended times or delayed.

RESULTS

The association of initiation of complementary feeding with socio-economic status, birth order, place of delivery and maternal education was found to be statistically significant. About 52.5% of our study population was in the upper middle socio-economic class followed by 22.5% in the upper lower and 19.5% in the lower middle socio-economic class. The association of socio-economic status and initiation of complementary feeds at the recommended time was statistically significant (p =0.036). In the upper middle class, 87.5% mothers had started complementary feeding at the recommended time. [Table 1]

40% mother gave prelactal feed. The commonest prelactal feed given was holy water. Further 85% of mothers gave colostrum to their babies.73% children were breast fed while 31% were exclusively breast fed. Timely initiation of breast feeding was seen in 55% of cases of normal deliveries and 61 % of C - section deliveries. It was further seen that 15 % of mothers breast fed for less then 6 months while 56% and 29% mothers breast fed their babies for 1 year and more then 2 years respectively.

155 (77.5%) mothers had started complementary feeding at the recommended time.10.5% of the mothers initiated complementary feeding before 6 months and 12% started it after 6 months. Complimentary feeding was delayed as 71% mothers felt that their milk was enough for the baby and rest 13% did not know when to start. Complementary feeding was discontinued in the event of illness in 59% of the cases.

Reason for discontinuation of breast feeding before 2 years were found to be child stopped himself/herself in 15% of the cases, family pressure in 14% cases .45% of the mother stopped by themselves while insufficient breast milk secretion was found to be the reason in 6% cases. [Table 2]

Statistical Analysis

The collected data was summarized by using frequency, percentage, mean & S.D. To compare the qualitative outcome measures Chi-square test or Fisher's exact test was used. The data was analyzed using SPSS version 11.5. Statistical test chi square was used to find out the association of various demographic factors with initiation and adequacy of complementary feeding. P value <0.05 was taken as statistically significant. To compare the quantitative outcome measures independent t test was used. If data was not following normal distribution, Mann Whitney U test was used. p value of <0.05 was statistically significant.

Table 1: Socio-Demographic Characteristics of Study Population

	SOCIO-DEMOGRAPHIC FACTORS	N (%)
1	**Age of children**	
	6 months-12 months	82(41)
	12 months-18 months	51(25.5)
	18 months-24 months	67(33.5)
2	**Gender**	
	Males	113 (56.5)
	Females	87(43.5)
3	**Mother's education**	
	a) illiterate	12(06)
	b) Primary school	17(08.5)
	d) High school	48(24)
	e) PUC	42(21)
	f) Graduate	48(24)
4	**Mother's occupation**	
	Housewife	162 (81)
	Working	38 (19)
5	**Socio-economic status**	
	Upper lower	45(22.5)
	Lower middle	39(19.5)
	Upper middle	105(52.5)
	Upper	11(5.5)

Table 2: Discontinuation of Breast Feeding

S. No.	Reason	Percentage
1	Child stopped himself/herself.	**15%**
2	Family pressure	**15%**
3	Mother stopped by themselves	**45%**
4	Insufficient breast milk secretion	**25%**

Table 3: Feeding Practices Adapted by Mothers

PRACTICES	N (%)
Time of starting complementary feeding (n=200)	
< 6 months	21(10.5)
At 6 months	155(77.5)
> 6 months	24(12)
Reasons for delayed complementary feeding (n=24)	
Did not know exactly when to start	3(13%)
Mother feels that her milk is enough for baby	17(71%)
Family elders tell not to give before one year	2(8%)
Mother feels child may not be able to digest it	1(4%)
Mother did not try as child had no teeth	1(4%)

DISCUSSION

Globally, less than half of all newborns (46 per cent) are put to the breast within an hour of birth. Less than 1 in 2 (48 per cent) infants 0–5 months of age worldwide are exclusively breastfed. The use of colostrums and avoidance of pre lactal food are the cornerstone in early infants nutrition and may be prerequisite for the establishment of future of breast feeding. Prelactal food was defined as food/liquid given to infant before initiation of breast feeding for the first time. Majority of women use still using ghutti, honey and sugar water.

In present study nearly 93% of mothers breast fed their children while 77.5 % of mother-initiated breast feeding within 1 hour after the birth. Almost similar percentage initiations of breast feeding within 1 hour was reported by other researcher Mohd Haroon Khanet al, (63%and 57.9%), Bhatt Shwetal et al (32.6%) Devang Rawal et al. However Higher rate of initiation of breast feeding within 1 hour (92%, 97%) were presented by K Madhu et al

and Maheswari Ekambaram et al, this difference may be due to local culture beliefs and practices that existed regions. In present study most usedprelactal feed was found to be holy water. We found that the prevalence prelactal feed was nearly 40% in our study which is almost like the findings as reported by H Gladius Jennifer et al (30%).Other researchers reported, Mohammad Harun Khan et al (80%),), MC Yadavannavar et al (92.25%), Devang Rawal et al (61.9%).

In the present study Child stopped himself/herself(15%)Insufficient breast milk secrete(26%),mother stopped by herself(45%)& family pressure(14%) were found to the common reasons for early discontinuation of breast feeding however Tampah-Naah etal reported household chores, work schedules, family influence on exclusive breastfeeding; low breast milk production; swollen breast or sore nipples, access to complementary food items as the reasons .In our study, approximately 96% of mothers were literate. The association of literacy and initiation of complementary feeds at the recommended time was statistically significant. Literate mothers were starting the complementary feeds at the recommended time compared to illiterate mothers.

Higher deliveries in the institution, may lead to better feeding practices. A prospective study of infant feeding practices carried out among children attending the under-five clinic at KEM hospital Mumbai, where all were hospital born, showed that initiation of complementary feeds at the recommended time was seen in 95 % children. About 52.5% of our study population was in the upper middle socio-economic class followed by 22.5% in the upper lower and 19.5% in the lower middle socio-economic class. The association of socio-economic status and initiation of complementary feeds at the recommended time was statistically significant. In the upper middle class, 87.5% mothers had started complementary feeding at the recommended time.

Most children (86%) were breastfed within four hours in the present study whereas in the study done at Allahabad only 55.8% of mothers-initiated breastfeeding within six hours of delivery. A study from Mumbai showed that 82.3% of infants were breast-fed within four hours of birth which is comparable to our study. The secondary data analysis of the National Family Health Survey 2005-06, which consisted of a sample size of 20,108 children showed that only 23.5% of mothers had initiated breastfeeding within the first hour after birth and 56.7% of infants aged six to nine months received complementary feeds. The early initiation of breastfeeding in our study could be attributed to a high institutional delivery rate of 98.5% as well as to a higher literacy rate among the mothers.

Common reasons for stopping breastfeeding were not enough milk and next pregnancy. Bottle feeding was practiced in 22% children in our study which is more than the 11% seen in the study by Bhonsle et al. This may reflect differences in the level of awareness and culture of the different populations with respect to appropriate infant feeding practices. Reasons proffered in this study for commencing weaning at wrong time was that the mother was not having enough milk (25%), mother stopped by herself (45%), family pressure (15%). Reason for not starting complimentary feed after 6-months were lack of awareness (39%), baby refused (15%), family pressure-(22%) Others-(24%). These findings are in consonance with Ambike D et al & Vyas et al.

CONCLUSION

The study has shown that a sizeable number of nursing mothers show poor adherence to WHO recommendations for breastfeeding and infants feeding practices. Intervention and further research should pay attention to factors such as cultural practices, access to and utilization of health care facilities, child feeding education and family planning. Further for properly following recommended breastfeeding practices there is necessity to promote mother's knowledge about breast feeding.

Declarations

Funding: None **Conflicts of interest/Competing interests**: None **Availability of data and material**: Department of Community Medicine Acharya Shri Chander College of Medical Sciences and Hospital **Code availability**: Not applicable **Consent to participate**: Consent taken **Ethical Consideration**: There are no ethical conflicts related to this study. **Consent for publication**: Consent taken

Limitations: The study was hospital-based. Community-based studies are required to represent the values in the general population. The study data was collected on a recall basis hence the study has a component of recall bias. Some of the questions used were not open-ended. With respect to complementary feeding practices the feed consistency was not taken in to consideration which is again a limitation. One more limitation of this study was the timescale over which this study was undertaken

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