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Original Research Article

Knowledge and attitude regarding complementary feeding practices among medical interns in Yenepoya medical college, Mangalore

Sowmya R. Nathan*, Haleema Nuwera, Shyam Sudhir, Rasheena Shamshu

Department of Pediatrics, Yenepoya Medical College, Mangalore, Karnataka, India

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***Correspondence:**
Dr. Sowmya R. Nathan,
E-mail: nathan.sowmya@gmail.com

ABSTRACT

Background: The health of the child depends on the attainment of the nutritional requirements, which include breast feeding followed by complementary feeding. The mother's knowledge on complementary feeding is greatly relied upon health workers. Therefore it is important for the health workers to know the recommended practices for infant and young child feeding practices so that they can impart the same to mothers.
Methods: Cross sectional hospital based questionnaire study conducted among 120 medical interns at Yenepoya medical college hospital, Mangalore. A score of more than 75% was considered good, 50-74% moderate, and less than 50% as poor. Statistical package of social science (SPSS) software was used for analysis of data.
Results: Out of the 110 respondents, majority of them (88.18%) of them agreed to initiate complementary feeding at 6 months. 82% of them responded that it should be initiated with rice/cereal based diet. Out of the 110 responded 87 of them agreed that for a 6-8 month old breastfed child the frequency of feeds needed to be at least 2 times or higher. Regarding the type of complementary feeding, 89.09% were aware that it should be started with mono-cereals.
Conclusions: This study concluded that majority of the medical interns had a good knowledge on the recommended feeding practices for the infant and young child. There were very few medical interns who had to be informed regarding the correct infant and young child feeding practices.

Keywords: Young children, Complementary feeding, Knowledge, Attitude

INTRODUCTION

The well being of the child depends upon the attainment of his nutritional necessities that include breast feeding and weaning. Weaning is the initiation of semisolid diet to a child who is taking only breast milk to meet his nutritional needs.[1]

The word weaning originated from the anglo-saxon word weaning meaning to become adapted to something different. It is a complex process that combines nutritional, biochemical and the mental adjustments. Weaning starts when an infant is gradually given semisolid foods. The very first introduction of foods other than breast milk is the complementary feed that the infant needs to compensate for his nutritional needs.[2]

Weaning is defined as the systematic process of introduction of suitable food at the right time in addition to mother's milk in order to provide needed nutrients to the baby.[2]

WHO and UNICEF have stressed the importance of 1000 days of life, which includes 270 days in-utero and two years of life after birth as the critical window period for growth.[3] They have recommended that an infant should be given adequate weaning for the first 2 years of life as an appropriate and safe means of protecting children from infection, and become a source of providing them the

essential nutrients that are needed for their growing bodies.[4]

The preferred term used now is complementary feeding since some mothers consider weaning to be abrupt stopping of breastfeeding.[2] The introduction of complementary food at the right time is important for nutritional as well as developmental factors. The capability of breast milk to meet the adequate requirements for micronutrients and macronutrients reduces as the infant starts to grow.[5] Complementary feeding after 6 months of age is extremely important due to higher risk of developing micronutrient deficiencies and malnutrition.[4]

According to the World health organization (WHO), the complementary feeding must possess the following characteristics: timely; introduction of additional foods to all infants should be started from 6 months onwards, adequate; the complementary foods should be of a nutritional value that can satisfy the growth needs of the child, appropriate; the foods selected for complementary feeding must satisfy the child's appetite and satiety. It must be appropriate in texture and in sufficient quantity and safe; the foods are prepared hygienically and stored appropriately. Infant should be fed with clean hands and utensils. It has been suggested that in addition to disease prevention strategies, complementary feeding interventions targeting this critical window are most efficient in reducing malnutrition and promoting adequate growth and development.[2,4]

The beginning of complementary feeding results in complete nourishment of the infant by the following way; acquiring the developmental milestones at the appropriate time, developing the taste and liking to the food supplemented, growth of renal and gastrointestinal functions and interlinkage of socioeconomic and cultural factors with family traditions.[6]

WHO recommends that infants start receiving complementary foods at 6 months of age in addition to breast milk, initially 2-3 times a day between 6-8 months, increasing to 3-4 times daily between 9-11 months and 12-24 months with additional nutritious snacks offered 1-2 times per day, as desired.[4]

Aim

Aim of the current study was to analyse the knowledge and attitude regarding complementary feeding among medical interns as mothers rely greatly on the advice given by doctors on appropriate infants and young children feeding (IYCF) practices. Therefore, the knowledge level of doctors plays an important role in the effective promotion of recommended complementary feeding practices.

METHODS

The present study was a cross sectional hospital based questionnaire study conducted among existing 120 interns at Yenepoya medical college hospital from March 2019 to February 2020. Data was collected from interns after the clearance was obtained from the institutional ethical committee. A structured questionnaire was given to the participants, which was prepared by using previously published studies. Before filling the questionnaire, the study population was briefed about the purpose and nature of the study; their consent was taken and confidentiality and anonymity was assured in all aspects. They were requested to fill out the questionnaire completely and truthfully. If a designated intern couldn't be contacted or was not cooperative, the subject was considered as a non-respondent. The questionnaire which was given included questions on the information on knowledge and attitude of complementary feeding practices. This questionnaire of 20 questions included multiple choice questions. Knowledge of complementary feeds was assessed from questions 1-13 and recommended attitude towards complementary feeds in questions 14-20. A scoring system was used where 1 point is given for each correct response to knowledge, positive attitudes, and good practices. 0 is given for incorrect knowledge, negative attitudes, and poor practices. A score of more than 75% was considered good, 50-74% moderate, and less than 50% as poor. Following this, data's were entered in Microsoft excel format and statistical analysis was done using descriptive analysis.

Study design

Current study was a hospital based cross sectional questionnaire based study within a time period of 12 months, conducted among the existing medical interns at Yenepoya medical college hospital.

Procedure

A structured questionnaire was prepared which was validated by the subject experts. This questionnaire was given to all medical interns. Data analysis was done using the SPSS software.

Source of data

The medical interns at Yenepoya medical college hospital from March 2019 to February 2020.

Inclusion criteria

Criterion for inclusion in current study was all medical interns in institution who were willing to participate.

Exclusion criteria

Criterion for inclusion from current study was interns who were not willing to participate.

Statistical analysis

Data was entered in Microsoft excel. Data was analyzed using SPSS version 22 and descriptive statistics reported necessary outcome variables. For a qualitative variable, reporting mean and standard deviation was done and for quantitative variable, reporting frequency and percentage was done.

Work plan

This study was conducted among the existing interns at our institution. The data was collected after clearance was obtained from the institutional ethical committee. A structured questionnaire was given to the participants, which was prepared by using previously published studies. Participants were numbered serially. Readings obtained were recorded and tabulated. Results were expressed in terms of proportion and percentage. Zero to 3 months synopsis presentation, 4 to 7 months data collection, 8 to 12 months statistical analysis, result interpretation and final presentation.

RESULTS

110 out of the 120 responded completely to the questionnaire.

Knowledge

As to the question of what age the complementary feeds should be initiated, 88.18% (97) agreed that it should be started at 6 months, 11.82% at 4 months. 82% responded that the diet should be started with rice/cereal-based and 15% mentioned it should be initiated with banana with 79% stating that the consistency should be runny and 20% that it should be semi-solid. A total of 90.9% of the participants were aware of the fact that a breast-fed child has more immunity over a non-breast fed child.74.54% of the interns stated that mashed rice with pulses can be initiated from 6-9 months whereas 18.18% thought that it had to be started at 10-12 months.71.81% mentioned that a variety of food from the family pot can be introduced by 12 months and 22.72% responded that it should be initiated by 9 months. A total of 94.54% of the interns were aware of the fact that early complementary feeding leads to contamination and infection. 88.18% of the respondents were aware that late weaning causes malnutrition and also 85.45% stated that diluted weaning foods are not nutritious. As to the recommended age up to which breastfeeding can be continued along with complementary feeds; 76.36% agreed up to 2 years. 91.81% agreed that cows' milk is not a complementary food but only 70.9% were aware of that inclusion of curd or yoghurt in the complementary food was to enhance vitamin C and digestibility. A total of 54.5% of the respondents were aware that infants prefer complementary feeds because harden gums helps to enjoy gumming.

Attitude

When questioned about the appropriate age of introduction of a range of food items the answers given are shown in (Table 1).

Table1: Appropriate age of introduction of various food items.

Food items	<6 months N (%)	>6 months N (%)	Do not know N (%)
Water/other liquids	18 (16.36)	92 (83.63)	0 (0)
Staple foods (cereals, roots & tubers)	9 (8.18)	101 (91.81)	0 (0)
Vegetables (added to food or on their own)	4 (3.63)	96 (87.27)	10 (9.09)
Fruits, dairy products (milk, cheese, yoghurt etc)	23 (20.90)	83 (75.45)	4 (3.63)
Meats (chicken, fish, meat)	5(4.54)	99 (90)	6 (5.4)
	6 months N (%)	**9 months N (%)**	**12 months N (%)**
Egg yolks	92 (83.63)	12 (10.90)	6 (5.45)
Whole eggs	89 (80.90)	18 (16.36)	3 (2.72)

Statistically, 87 respondents knew that the feeding frequency for a 6-8-month-old breastfed child was 2 times or higher whereas 93 responded for a 9-23 months old breastfed child 3 times or higher (Table 2). A total of 94 interns were aware of the fact that the recommended frequency of feeding milk and milk products to a non-breastfeeding 6-23 months old children was twice or more than twice daily.

In regards of complementary feeding, 89.09% were aware of the fact that it should be started with mono-cereals and only 71.81% knew that it should be started with 2-3 tablespoons and 57 interns were aware that recommended duration to continue 1 type of mono cereals in complementary feeds was up to 1 week. 62 respondents were aware that a new feed must be added in the morning.

DISCUSSION

This study was conducted to assess the knowledge and attitude regarding infant and young child feeding

practices among the medical interns. A similar study conducted by Asamoah at Ghana in 2018, on healthcare workers of which 86.5% of healthcare workers responded the age of introduction of complementary foods is after 6 months of age and 7.8% of health care workers answered wrongly that water could be introduced before 6 months of age. In our study, it was found that 88.18% agreed that complementary feeding should in introduced at 6 months and 83.63% answered that the appropriate timing of introduction of water is after 6 months.[7]

Table 2: Feeding frequency for various age groups.

Age	Frequency of meals, N (%)		
6-8 months old breastfeeding children	**0-1 meal/day**	**≥2 meals/day**	**Do not know**
	19 (17.27)	87 (79.09)	4 (3.63)
9-23 months old breastfeeding child	**0-2 meals/day**	**≥3 meals/day**	**Do not know**
	14 (12.72)	93 (84.54)	3 (2.72)
9-23 months old non breastfed child	**0-3 meals/day**	**≥4 meals/day**	**Do not know**
	6 (5.45)	102 (92.72)	2 (1.81)

A cross sectional study was conducted by Abebe et al on health extension worker's knowledge and knowledge sharing effectiveness of optimal infant and young child feeding are associated with mother's knowledge and child stunting in rural Ethiopia. In their study it was found that only 45% of mother had access to knowledge through the health extension program conducted in their country. It was found that the infant and young feeding practices were not well understood by the health care workers which in turn affected the knowledge sharing effectiveness to the mothers. This gap between the health workers and mothers was associated with stunting in children.[8]

Chapagain concluded in his study that 56.81% mothers had knowledge about the appropriate consistency of complementary feeds, 33.27% regarding frequency and 75.82% regarding appropriate amount. It was found that only 15.82% were actually appropriately feeding in the right amount and frequency. There was lack of understanding regarding the proper feeding practices was the major factor associated.[9]

Kittisakmontri et al studied the knowledge, attitude and their practices regarding complementary feeding in urban Thai families. It was observed that mothers had a better understanding and confidence when compared to the family members. Most of their respondents correctly regarding the initiation of complementary feeding, but some of the families provided a less variety of food and delayed introduction of animal based protein. As a result of these there was reduced intake of micronutrients. This study also brought up the importance that other care givers in the family should also be educated regarding infant and young child feeding practices.[10]

Rao et al came to conclusion that mothers where aware about initiating the complementary feeds at 6 months of age though there was lack of knowledge about the quantity and frequency of the feeds.[11]

Mohammed et al studied knowledge, attitude and practices of mothers toward starting of complementary feeding for their infants in 2018. It was seen that 81% of mother continued to breast feed till 2 years. 60% of mothers reported that they would wait till 2 years for weaning, 8% at 6 months and 32% at the age of 1 year.[12] Motee et al evaluated the mothers of Mauritius on breast feeding practices and infant feeding pattern. They reported that 75.2% initiated complementary feeding at 4-6 months of age. They started weaning with mashed vegetables or fruits and the basis being easy availability of home-made food and hygiene.[13]

Knowledge of community health workers regarding early initiation of breast feeding, exclusive breast feeding and age of initiation of complementary feeding was found to be ≥80% in a study conducted by Kohli and Chadha. In their study ≤50% community health workers knew about the consistency of the complementary feeds to be given. They reported gaps in the community health workers counselling skills like difficulty in translating knowledge into message and to explain the Infant and young child feeding practices.[14]

Outcome of study conducted by Sethi et al that there is a significant relation between the age of complementary feeding and malnutrition in children less than 2 years of age. 61.4% of mother's started complementary feeding earlier because of insufficient milk, 36.6% mother's started complementary feeding since they perceived child needed more milk, and 6% mothers started complementary feeding as the infant was sick and not taking breast milk. They concluded mother's knowledge concerning the timing of complementary feeding is poor and practises improper methods.[15]

CONCLUSION

This study concludes that majority of the medical interns had a good knowledge on the recommended feeding practices for the infant and young child. There were very few medical interns who had to be informed regarding the

correct infant and young child feeding practices. The higher level of knowledge regarding the correct complementary feeding practices of the medical interns can result in good nutritional advice to mothers. To summarize essential knowledge that every health professional has regarding complementary feeding plays a crucial role. The expecting mothers should be counselled on proper feeding methods and complementary feeding practices so that they are well educated from the nutritional point of view which, help them to provide adequate nutrition during infancy and early childhood to ensure the growth, health, and development of their children to their full potential.

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