

## A Study on Knowledge, Attitude and Practice of Complementary Feeding among Mothers with Children between 6-24 Months in a Rural Tertiary Care Center, Mandya, Karnataka

Madhunandan Krishnegowda<sup>1</sup>, Praveen Unki<sup>2</sup>, Nandhakumar V<sup>3</sup>, Deepanjali G Golshetty<sup>4</sup>, Keertirani Meti<sup>5</sup>

### Authors Affiliation

<sup>1,2</sup>Assistant Professor, <sup>3,5</sup>Senior Resident, <sup>4</sup>Junior Resident, Department of Pediatrics, Adichunchanagiri Institute of Medical Sciences, Mandya, Karnataka 571432, India.

### Corresponding Affiliation

Keertirani Meti, Senior Resident, Department of Pediatrics, Adichunchanagiri Institute of Medical Sciences, Mandya, Karnataka 571432, India.

Email: keertiameti@gmail.com

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### Abstract

#### Introduction

Complementary feeding refers to the process of starting giving foods and liquids other than breast milk to the infants for their nutritional needs due to the insufficiency of breast milk. Inappropriate complementary feeding practices causes some problems such as stunting, delay in the motor and mental development, neurological and mental fatigue, frequent diarrhea, lack of micro-nutrient and macro-nutrient or malnutrition. Materials and methods: A cross sectional questionnaire based study among 200 mothers with children aged between 6-24 months, face to face interview using a pre-designed, self-administered, standardized questionnaire regarding knowledge, attitude and practices of breastfeeding was conducted. Data thus obtained was compiled and entered in MS Excel spread sheet; descriptive statistics was applied, cross tables were constructed, data was expressed in terms of frequency and percentage. Results: There were 200 study participants; majority of the mothers (72%) knew the meaning of complementary feeding, 53% of them knew the appropriate timing of initiation of complementary feeding, 68% of them knew appropriate frequency of complementary feeding and 64% of the mothers practiced good hygiene. Conclusion: It is important to educate mothers and other family members regarding knowledge, attitude and practice of complementary feeding.

**Keywords:** Complementary feeding; Knowledge; Attitude; Practice.

### Introduction

Complementary feeding refers to the process of starting giving foods and liquids other than breast milk to the infants for their nutritional needs due to the insufficiency of breast milk<sup>1</sup>. 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.<sup>2</sup> There is a critical window of growth & development during first 2 years of a child. The concept of 1000 days is 9 months of pregnancy plus first 2 years of life during which optimal breastfeeding (for 6 month of age) and timely as well as appropriate feeding is important. According to World Health Organization (WHO) the

complementary feeds must possess the following main characteristics: timely meaning that they are introduced when the need for energy and nutrients exceeds what can be provided through exclusive breastfeeding; adequate meaning that they provide sufficient energy, protein and micronutrients to meet a growing child’s nutritional needs; safe meaning that they are hygienically stored and prepared, and fed with clean hands using clean utensils and not bottles and teats; properly fed meaning that they are given consistent with a child’s signals of appetite and satiety, and that meal frequency and feeding are suitable for age.<sup>2</sup> Inappropriate complementary feeding practices causes some problems such as stunting, delay in the motor and mental development, neurological and mental fatigue, frequent diarrhea, lack of micro-nutrient and macro nutrient or malnutrition.<sup>3</sup> WHO recommends that infants start receiving complementary foods at 6 months of age in addition to breast milk. Initially, they should receive complementary foods 2–3 times a day between 6–8 months and increase to 3–4 times daily between 9–11 months and 12–24 months. Additional nutritious snacks should also be offered 1–2 times per day for ages 12–24 months, as desired.<sup>4</sup>

According to WHO, 149 million children under 5 were estimated to be stunted, 45 million were estimated to be wasted.<sup>5</sup> Around 45% of deaths among children under 5 years of age are linked to under nutrition 5. The new NFHS-5 data for 15 states including Karnataka showed 35.4% under five age children were stunted and 19.5 % showed wasting in under 5 years of age children. Appropriate Infant and young child feeding practices are essential for optimal growth, cognition development and overall wellbeing in early vulnerable year of life.<sup>6</sup> This supports that following correct feeding practices is not only beneficial for the child’s nutritional status, but also his development skills. Inappropriate nutrition also can lead to childhood obesity which increasing public health problems.

**Materials and methods**

**Objective**

To assess the maternal knowledge, attitude & practice of complementary feeding among mothers having children between 6-24 months.

**Source of Data**

Study Place Study was conducted in rural teaching hospital Adichunchanagiri institute of medical science, Mandya district, Karnataka.

Study Duration September 2020 - October 2020.

Study Sujection	Mothers with children aged between 6-24 months attending paediatric outpatient and inpatient department.
Study Design	Cross sectional, questionnaire based study in the setting of medical college and hospital predominantly catering the health needs of rural population.
Study Sample	200.

**Exclusion criteria:** Not willing to participate in study.

**Method of Data Collection**

Informed consent was taken from mothers of children aged between 6-24 month visiting paediatric outpatient and inpatient department of Adichunchanagiri Institute of Medical Sciences. A face to face interview using a pre designed, self-administered, standardized questionnaire regarding knowledge, attitude and practices of complementary feeding was conducted. The questionnaire, included data about maternal age, education of mother, type of family, employment, socioeconomic status, religion, residence, gender of the child, initiation and duration of exclusive breastfeeding and practices.

**Statistical Analysis**

Data thus obtained was compiled and entered in MS Excel spread sheet; descriptive statistics was applied, cross tables were constructed, data was expressed in terms of frequency and percentage.

**Results**

A total of 200 mothers were willing to participate in the study, majority of the mothers 104 (52%) had babies between 6-12 months of age, followed by 13-18 months of age 64 (32%). We had total of 108 (54%) male babies and 92 (46%) female babies. Among them 116 (58%) belong to joint family and 94(47%) belong to nuclear family. 124(62%) participants had secondary education, 32 (16%) had primary education, 28 (14%) with intermediate education and 12 (6%) with bachelor degree. 104 (52%) participants in our study group were home makers. Majority of the cases 104 (52%) belonged to class III BG Prasad socio economic classification which is followed by class II 56 (28%) (Table 1).

Table 1: Demographic details of participants.

Background Characteristics	Values	Frequency	%
Age (Months)	6-12	104	52%
	13-18	64	32%
	19-24	32	16%
Sex	Male	108	54%

Table continous...

Type of Family	Female	92	46%
	Nuclear	94	47%
	Joint	116	58%
Mother's Education	Illiterate	4	2%
	Primary	32	16%
	Secondary	124	62%
	Intermediate	28	14%
	Bachelor & above	12	6%
Mother's Occupation	Housewife	104	52%
	Agriculture	64	32%
	Business	8	4%
	Service	16	8%
	Skilled work	8	4%
Socio-economic Status	Class 1	8	4%
	Class 2	56	28%
	Class 3	104	52%
	Class 4	32	16%
	Class 5	-	-

From table 2, majority of the mothers 144 (72%) had knowledge regarding meaning of complementary feeding. 106 (53%) of study participants were aware of appropriate time (6 months) to start complementary feeding, 136 (68%) participants knew appropriate frequency of complementary feeding and 124 (62%) participants knew appropriate amount of complementary feeds, while only 60 (30%) were aware of appropriate consistency of complementary feeding.

Table 2: Knowledge about the complementary feeds.

Characteristic	Values	Frequency	%
Meaning of complementary feeding	Yes	144	72%
	No	56	28%
Appropriate time to start complementary feed	<4 months	20	10%
	4-6 months	74	37%
	6 months	106	53%
Frequency of complementary feedday	Appropriate	136	68%
	Inappropriate	64	32%
Amount of complementary feed	Appropriate	124	62%
	Inappropriate	76	38%
Consistency of complementary food	Thick	52	26%
	Thin	88	44%
	Appropriate	60	30%

From table 3, Majority of participants 98 (49%) initiated complementary feeding at 6 months of age and 79 (39.5%) at 4-6 months of age. Among them majority initiated with cereal based complementary feeds ragi was most commonly used cereal followed by rice 38 (19%), cow's milk was initiated as first feed by 60 (30%) participants. 102 (51%) participants had appropriate

attitude towards complimentary feeding. 110 (55%) of them used separate container for complimentary feeds. Only 24 (12%) of them used market foods and 176(88%) did not use market foods.

Table 3: Complementary Feeding Attitude.

Characteristics	Values	Frequency	%
Age of initiation of complementary feeds	<4months	23	11.5%
	4-6 months	79	39.5%
	6 months	98	49%
First initiated complementary feeds	Rice porridge	38	19%
	Ragi porridge	82	41%
	Fruits	4	2%
	Honey	3	1.5%
	Mashed potato	3	1.5%
	Cow's milk	60	30%
	Biscuit	2	1%
Type of complementary feed	Cerealac/Farex/Nestum rice.	8	4%
	Cereals	120	60%
	Pulse	90	45%
	Commercial food products	40	20%
	Vegetable & fruits	128	64%
	Egg, meat or fish	66	33%
	Milk products	132	66%
Attitude of mother toward feeding during illness	Appropriate	102	51%
	Inappropriate	98	49%
Separate container	Yes	110	55%
	No	90	45%
Use of market foods	Yes	24	12%
	No	176	88%

Majority 128 (64%) among the study population followed good hygiene practices. 136 (68%) have continued breastfeeding after starting complementary feeds and 64 (32%) stopped feeding after starting complementary feeding. Most of them 138 (69%) have used oil/ghee to increase the calories (Table 4).

Table 4: Complementary feeding practices.

Characteristics	Values	Frequency	%
Hygiene practice	Yes	128	64%
	No	72	36%
Continuing breast feeding after starting complementary feeds	Yes	136	68%
	No	64	32%
Addition of oil or ghee (to add extra calories)	Yes	138	69%
	No	62	31%

## Discussion

In Infants and children feeding practices including exclusive breastfeed till 6 months of age and there after timely introduction of semi-solid/solid foods from age of six months subsequently increasing amount and frequency over time along with breast feeding as demanded by the child.

In our study, we found that 72% of mother knew the meaning of complementary feeding. Similar study done by Singh D et al<sup>7</sup> and Deshpande M et al<sup>8</sup> found 52% and 62.3% of mother knew regarding complementary feeding respectively. In our study 53% of mother knew appropriate time of initiation of complementary feeds, while study done by Deepthi singh et al<sup>7</sup>, Deshpande M et al<sup>8</sup> and Kumar A et al<sup>9</sup> showed 14%, 90% and 88% respectively, initiated complimentary feeds at appropriate time. In our study 68% of mothers knew appropriate frequency of complementary feeds. In a study done by Singh D et al<sup>7</sup> and Kumar A et al<sup>9</sup> 34.6% and 36.8% respectively knew appropriate frequency of complementary feeds. In our study 64% of mothers practiced good hygiene while in a study done by Singh D et al<sup>7</sup> 18.6% practiced good hygiene.

Appropriate time, frequency and consistency should be given importance. In appropriate complimentary feeding can lead to malnutrition, growth delay and neurological complications like infantile tremor syndrome.<sup>10</sup>

## Conclusion

Health education about correct feeding should be given to mothers and family members including appropriate time for complementary feeding initiation, complementary foods, its preparation and practices to give on proper time and amount and hygiene. It is also important to provide adequate education regarding adequate complementary and hygienic practices.

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