



# International Journal of Research In Paediatric Nursing

E-ISSN: 2664-1305  
P-ISSN: 2664-1291  
[www.paediatricnursing.net](http://www.paediatricnursing.net)  
IJRPN 2024; 6(1): 32-35  
Received: 19-11-2023  
Accepted: 27-12-2023

## Dr. Thenmozhi P

Professor, Saveetha College of Nursing, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai, Tamil Nadu, India

## Daphin Steni SH

B.Sc. (N) IV Year, Saveetha College of Nursing, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai, Tamil Nadu, India

## Deepika V

B.Sc. (N) IV Year, Saveetha College of Nursing, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai, Tamil Nadu, India

## Dilli Rani N

B.Sc. (N) IV Year, Saveetha College of Nursing, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai, Tamil Nadu, India

## Corresponding Author:

### Dr. Thenmozhi P

Professor, Saveetha College of Nursing, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai, Tamil Nadu, India

## Level of knowledge and practice on complementary feeding among primi mothers of infant: Community based cross-sectional study

Dr. Thenmozhi P, Daphin Steni SH, Deepika V and Dilli Rani N

DOI: <https://doi.org/10.33545/26641291.2024.v6.i1a.150>

### Abstract

**Introduction:** Complementary feeding is the process that begins when breast milk alone is no longer sufficient to meet the nutritional requirements of infants; therefore, additional food is needed in conjunction with breast milk. The initiation of appropriate complementary feeding by mothers is critical for the physical and mental well-being of the child within the recommended period. Hence, the present study was conducted to assess the level of knowledge and practice on complementary feeding among primi mothers of infants, considering the significant importance of complementary feeding for children.

**Methods:** A quantitative community-based cross-sectional study was conducted in Mappedu Village of Thiruvallur District. The tools used for the study to collect data were demographic variables, structured multiple-choice questionnaires, and a checklist to assess baseline information, knowledge, and practice on complementary feeding, respectively. The interview method was adopted to collect data on a one-to-one basis. The data were tabulated and analyzed using descriptive and inferential statistics.

**Results:** Out of 30 participants, 8 (26.7%) had inadequate knowledge, 15 (50%) had moderately adequate knowledge, and 7 (23.3%) had adequate knowledge. Regarding practice on complementary feeding, 10 (33.3%) had poor practice, 13 (43.4%) had good practice, and seven (23.3%) had the best practice. It was also found that there is a significant association between knowledge and practice.

**Conclusion:** The study findings concluded that primi mothers of infants have inadequate knowledge and poor practices of complementary feeding. Instructional materials can be developed to increase awareness among mothers about complementary feeding during the antenatal period itself.

**Keywords:** Complementary feeding, infant, knowledge, malnutrition primi mother, practice

### Introduction

Children constitute one-third of our population and embody the entirety of our future. To cultivate a thriving society, it is crucial to nurture healthy children as they serve as a significant asset to the family, society, and nation. The health of mind, body, and spirit profoundly influences the future and welfare of the nation. The health of the child begins with the early initiation of breastfeeding, within one hour of birth, and continues exclusively for six months. This should be followed by the introduction of complementary feeds along with breast milk until at least the age of two<sup>[1]</sup>. Complementary feeding is the process that commences when breast milk alone is no longer sufficient to meet the nutritional requirements of infants and therefore, food is needed in addition to breast milk<sup>[2]</sup>. Proper breastfeeding and complementary feeding practices can reduce under-five mortalities by 19%<sup>[3]</sup>. Initiating complementary feeds too early or too late can lead to some consequences. The early introduction of complementary feeds before the age of six months can result in the displacement of breast milk, leading to an increased risk of infections such as diarrhea. This, in turn, contributes to weight loss and malnutrition<sup>[4]</sup>. Additionally, it is believed that babies are not physiologically ready to receive complementary feeds before six months due to the immaturity of the gastrointestinal and neurodevelopmental systems, as well as the kidneys<sup>[5]</sup>. The delayed introduction of complementary feeds can also lead to malnutrition because this period is crucial for both physical and cognitive development<sup>[6]</sup>. The World Health Organization recommends that mothers should have adequate knowledge of appropriate complementary feeding for safe, healthy, and hygienic practices<sup>[1]</sup>. Practicing good hygiene and proper food handling is one of the pillars of complementary feeding. Appropriate complementary feeding is an important determinant for the achievement of healthy growth

and the survival of young children in their early years of life. It has the potential to prevent 6% of all under-five deaths, particularly in the developing world [7]. Complementary feeding Start at 6 months with small amounts of food and increase the number of times that the child is fed: 2-3 meals per day for infants 6-8 months of age and 3-4 meals per day for infants 9-23 months of age, with 1-2 additional snacks as required and also gradually increase food consistency and variety [1]. Complementary feeding is more than ensuring an adequate intake of nutrients; it also involves avoiding excess intakes of calories, salt, sugars, and unhealthy fats. Complementary feeding is responsive and promotes child autonomy, but it can also be used to manage behavior problems or overly indulge a child, resulting in long-term consequences for nutrition and health [8]. Additionally, complementary foods must provide relatively large proportions of micronutrients such as iron, zinc, phosphorus, magnesium, calcium, and vitamin B6 [9]. In several parts of the developing world, complementary feeding remains a challenge to ensuring good nutrition in children aged 6-23 months [10]. The initiation of appropriate complementary feeding by mothers depends on accurate information or knowledge and skilled support from family members, the community, and the healthcare system. Inadequate knowledge about appropriate food and feeding practices is often a greater determinant of malnutrition than the lack of food. Understanding mothers' knowledge about these factors will be helpful in planning interventions to improve feeding practices. Hence, the present study was conducted to assess the level of knowledge and practice on complementary feeding among primi mothers of infants, considering the significant importance of complementary feeding for children.

## Materials and Methods

A quantitative community-based cross-sectional study was

conducted at Mappedu Village of Thiruvallur District in Chennai after getting approval from Institutional Scientific Review Committee. The sample size for this study was 30 and were selected by snow ball sampling technique who met the inclusion criteria. All primipara mothers of infant with the age group between 18 to 30 years, who are conscious, mentally capable to participate in the study, willing to participate in the study, could able to understand Tamil and English were included and mothers with severe acute medical and problem and interested and willing to participate in the study were excluded from the study. Written informed consent was obtained from the study participants after giving adequate information about the purpose of the study and the importance of their participation. Baseline information of socio demographic variables and knowledge level was assessed by structured interview method on one to one basis by using multiple choice questionnaire and check list was used to assess the level of practice. Questionnaires were prepared in English language after consulting with experts in relevant domain and it was translated to the regional language of Tamil to ensure the quality. Knowledge related questionnaire was scored by giving ONE mark for each correct answer and ZERO was given for the wrong answer. The score was interpreted as inadequate knowledge (<50%), moderately adequate knowledge (51-75%) and adequate knowledge (>76%). Similarly, practice was assessed by the yes or no type checklist based and the score was given as one for yes and no for zero and were interpreted as poor, good and best. Confidentiality was maintained during the collection and process of the data. Data were tabulated and analyzed using SPSS software package. P values less than 0.05 were considered statistically significant.

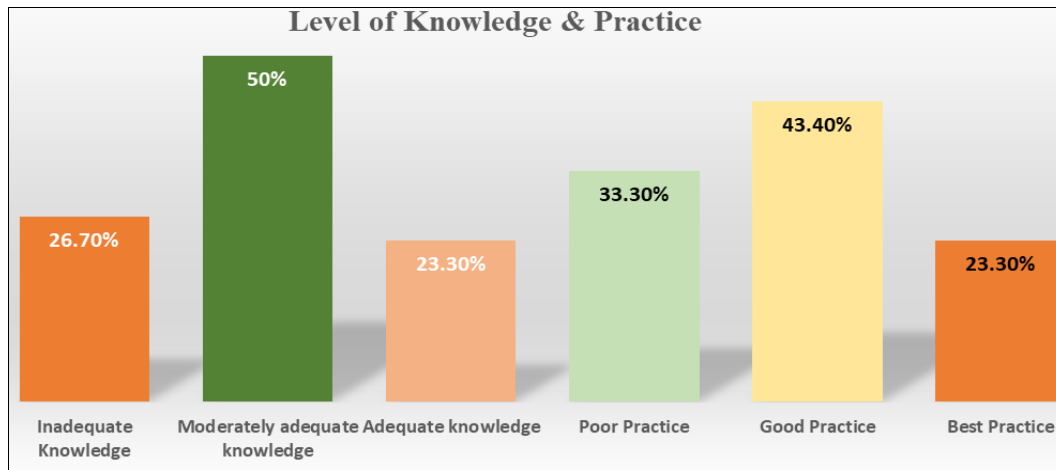
## Results

**Table 1:** Distribution of baseline information

S. No.	Socio Demographic Variables	Classification	Frequency	Percentage (%)
1.	Age in years	19-23	18	60.0
		23-30	10	33.7
		31-36	2	6.3
2.	Educational status	Primary School	12	40.0
		High School	9	30.0
		Higher Secondary	6	20.0
		Graduates & Above	3	10.0
4.	Occupation	Housewife	6	20.0
		Daily wages	9	30.0
		Private Job	11	36.6
		Government Job	4	13.4
3.	Type of family	Nuclear	16	53.0
		Joint	10	33.7
		Extended	4	13.3
4.	Religion	Hindu	24	80
		Christian	4	13.3
		Muslim	2	6.7
5.	Information obtained through	Health care Personnel	23	76.6%
		Mass Media	3	10%
		Others	4	13.4%

Out of 30 participants, 18 (56.6%) were in the age group of 19-23 years and 12 (40%) had completed their schooling till primary education, 11 (36.6%) were doing job in private company, more than 50% are belongs to nuclear family and

were Hindu 23 (76.6%) of mother had acquired information regarding complementary feeding from health care personnel.



**Fig 1:** Percentage distribution of level of knowledge & Practice

Figure 1 shows that out of 30 participants, 8 (26.7%) had inadequate knowledge, 15 (50%) had moderately adequate knowledge and 7 (23.3%) of them had adequate knowledge.

10 (33.3%) had poor practice, 13 (43.4%) had good practice and seven (23.3%) had best practice.

**Table 2:** Mean and Standard deviation of level of knowledge and practice

	Mean & Standard Deviation
Level of Knowledge	14.7±2.76
Level of Practice	6.7±1.52

The mean and standard deviation of knowledge and practice on complementary is 14.7±2.76 and 6.7±1.52 respectively

as shown in Table 2.

**Table 3:** Correlation between the level of knowledge and the level of practice

Sl. No.		Mean	Standard deviation	"r" value
1.	Level of Knowledge	14.7	2.76	r = 0.64, DF = 28 S p<0.05
2.	Level of Practice	6.7	1.52	

Table 3 depicts that there is a significant positive correlation between the level of knowledge and level of practice on complementary feeding among primipara mothers of infants.

**Association between the level of knowledge and Practice and demographic variables**

There is no significant association between the level of knowledge and Practice and demographic variables the level of p<0.05.

**Discussion**

Breast milk alone falls short of providing the full nutritional requirements as infants grow and become more active after the first 6 months of life. The gap continues to expand with the increasing age of the infants and their nutritional requirements [11-12]. Complementary feeding plays a critical role in bridging these gaps. Moreover, infants and young children are at an increased risk of malnutrition from six months of age onwards, when breast milk alone is no longer sufficient to meet all their nutritional requirements, and complementary feeding should be started. Initiating complementary feeds either too early or too late can lead to malnutrition [6]. The present study investigated to assess the level of knowledge and practice of complementary feeding among primi mothers of infants and found that 26% had inadequate knowledge and 33% had poor practice. There was a significant positive correlation between knowledge and practice. Although 76% had obtained information from healthcare personnel regarding complementary feeding,

there was a lack of knowledge and practice. Moreover, the majority of them were educated only up to primary schooling and lived in nuclear families. This could be the reason for the inadequate knowledge and poor practice. However, approximately 55% of mothers initiated complementary feeding at the end of 6 months of age, while 24% and 21% started before 6 months of age and after 6 months of age, respectively. The present study finding is supported by the study conducted by Seema Hasnain *et al.*, 2013 who found that about 84% continued breastfeeding along with complementary feeding. The correct knowledge of initiation of complementary feeding was found in 54% of mothers but it was practiced by only 43%. The overall knowledge of 24% mothers was good and 28% had poor knowledge of complementary feeding whereas only 7% women had good overall practices [13]. Similarly, A descriptive cross-sectional study conducted by Bhujel S *et al.*, 2021 and their findings revealed that 26.6% had inadequate knowledge, whereas 73.4% had adequate knowledge on complementary feeding. Likewise, 51.9% did the right practice, while 48.1% out of 158 mothers of children age group 6 to 24 months [14]. In another by Kavitha S *et al.* (2014) to study the Complementary feeding practices among mothers of infants aged six months to one year and proved that 62% mothers had started complementary feeding before the recommended time of six months [15]. Rao S *et al.*, 2011, conducted a study on complementary feeding practices among mothers of children aged six months from coastal south India and found that 77.5% mothers had started complementary feeding at

the recommended time of six months. Only 32% of mothers were giving an adequate quantity of complementary feeds [16]. In the present study also found only 27% of the mothers were optimal nutrition because of scaring of introducing new food. Poor food hygiene practice is one of the major contributors to childhood diarrhea up to 70% of diarrhea episodes in developing countries [17]. However, the current study lacks a deep analysis of food hygienic practices during complementary feeding. Hence, the present study recommends conducting a prospective study on food hygienic practices. It also suggests comparing the knowledge and practices between rural and urban mothers of infants, as well as primiparous and multiparous mothers of infants. Additionally, the study proposes designing an interventional study to impart knowledge on complementary feeding, considering that many mothers lack adequate knowledge.

### Conclusion

The study findings concluded that primi mothers of infants have inadequate knowledge and poor practices of complementary feeding. Instructional materials can be developed to increase awareness among mothers about complementary feeding during the antenatal period itself. Nurses play a very important role in sensitizing mothers regarding appropriate complementary feeding techniques with hygienic practices during antenatal visits or whenever mothers visit the hospital or nurses visit homes.

### Acknowledgement

Authors would like to appreciate and thankful to the participants for their cooperation to complete the study successfully.

**Conflict of Interest:** Not available.

**Financial Support:** Not available.

### References

1. [https://www.who.int/health-topics/complementary-feeding#tab=tab\\_1](https://www.who.int/health-topics/complementary-feeding#tab=tab_1)
2. Melese BD, Admasu FT, Bayih ET, Yitbarek GY. Hygienic Practice during Complementary Feeding and Associated Factors among Mothers of Children Aged 6-24 Months in Bahir Dar Zuria District, Northwest Ethiopia, 2019. *Journal of Environmental and Public Health*; c2020. Article ID 2075351.
3. Jones G, Stekette RW, Black RE, Bhutta ZA, Morris SS. How many child deaths can we prevent this year? *Lancet*. 2003;362:65-71.
4. The breast feeding promotion network of India. Introducing solids (Complementary Feeding) Available from: [http://www.bpni.org/breastfeeding/intro-complementary\\_feeding.html](http://www.bpni.org/breastfeeding/intro-complementary_feeding.html).
5. Cohen RJ, Rivera LL, Canahuati J, Brown KH, Dewey KG. Delaying the introduction of complementary feeding until 6 months doesn't affect appetite or mother's report of food acceptance of breast fed infants from 6-12 months in a low income Honduran population. *J Nutr*. 1995;125(11):2787-2792.
6. Aggarwal A, Verma S, Faridi MMA, Dayachand. Complementary feeding reasons for inappropriateness in timing, quantity and consistency. *Indian J Pediatr*. 2008;75:49-53.
7. Dewey KG. The challenges of promoting optimal infant growth. *The Journal of Nutrition*. 2001;(131):1879-1880.
8. Lutter CK, Grummer-Strawn L, Rogers L. Complementary feeding of infants and young children 6 to 23 months of age. *Nutrition Reviews*. 2021 Jul;79(8):825-846. DOI: 10.1093/nutrit/nuaa143. PMID: 33684940.
9. Abeshu MA, Lelisa A, Geleta B. Complementary Feeding: Review of Recommendations, Feeding Practices, and Adequacy of Homemade Complementary Food Preparations in Developing Countries - Lessons from Ethiopia. *Front Nutr*. 2016;3:41.
10. World Health Organization/United Nation Children's Fund. Complementary Feeding of Young Children in Developing Countries: A Review of Current Scientific Knowledge. Geneva: WHO Press; c1998. Available from: [http://www.who.int/nutrition/publications/infantfeeding/WHO\\_NUT\\_98.1/en/](http://www.who.int/nutrition/publications/infantfeeding/WHO_NUT_98.1/en/)
11. World Health Organization/United Nation Children's Fund. Global Strategy for Infant and Young Child Feeding. Geneva: WHO Press; c2003. Available from: [http://www.who.int/nutrition/publications/gi\\_infant\\_feeding\\_text\\_eng.pdf](http://www.who.int/nutrition/publications/gi_infant_feeding_text_eng.pdf)
12. Dewey KG. Nutrition, growth and complementary feeding of breastfed infant. *Pediatr. Clin. North Am*. 2001;48(1):87-104.
13. Hasnain S, Majrooh MA, Majrooh, Anjum R. Knowledge and practices of mothers for complementary feeding in babies visiting pediatrics outpatient department of Jinnah Hospital, Lahore. *Biomédica*. 2013;29(4):221-230
14. Bhujel S, Khadka R, Baskota S, Poudel L, Bista S, Gurung M, *et al*. Knowledge and Practice of Complementary Feeding among the Mothers of the Child Aged Group 6-24 Months, Tanahu District, Nepal. *J Nepal Health Res. Counc*. 2021 Apr 23;19(1):127-134.
15. Sampath K. Study of Complementary feeding practices among mothers of infants aged six months to one year. *Healthline*, 2014;(593):29-35.
16. Rao S, Swathi P, Unnikrishnan B, Hegde A. Study of complementary feeding practices among mothers of children aged six months to two years - A study from coastal south India. *Australas. Med. J*. 2011;4(5):252-257.
17. Agustina R, Sari TP, Satroamidjojo S, Bovee-oudenhoven IMJ, Feskens EJM, Kok FJ, *et al*. Association of food-hygiene practices and diarrhea prevalence among Indonesian young children from low socioeconomic urban areas, *BMC Public Health*, 2013, 13(1).

#### How to Cite This Article

Thenmozhi P, Daphin Steni SH, Deepika V, Dilli RN. Level of knowledge and practice on complementary feeding among primi mothers of infant: Community based cross-sectional study. *International Journal of Research in Paediatric Nursing*. 2024;6(1):32-35.

#### Creative Commons (CC) License

This is an open-access journal, and articles are distributed under the terms of the Creative Commons Attribution-Non Commercial-Share Alike 4.0 International (CC BY-NC-SA 4.0) License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.