

Study of Infant and Young Child Feeding practices and its indicators among mothers of children aged 6-23 months attending tertiary care hospital in South India

¹Anjana Murthy K, Associate Professor, Department of Pediatrics, Bangalore Medical College and Research Institute, Bengaluru, India.

²Anusha Athadkar, Junior Resident, Department of Pediatrics, Bangalore Medical College and Research Institute, Bengaluru, India.

³Mallesh Kariyappa, Professor, Department of Pediatrics, Bangalore Medical College and Research Institute, Bengaluru, India.

Corresponding Author: Anusha Athadkar, Junior Resident, Department of Pediatrics, Bangalore Medical College and Research Institute, Bengaluru, India.

How to citation this article: Anjana Murthy K, Anusha Athadkar, Mallesh Kariyappa, “Study of Infant and Young Child Feeding practices and its indicators among mothers of children aged 6-23 months attending tertiary care hospital in South India”, IJMACR- May - 2023, Volume – 6, Issue - 3, P. No. 466 – 471.

Open Access Article: © 2023, Anusha Athadkar, et al. This is an open access journal and article distributed under the terms of the creative commons attribution license (<http://creativecommons.org/licenses/by/4.0>). 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.

Type of Publication: Original Research Article

Conflicts of Interest: Nil

Abstract

Objectives

1. To assess the initiation and continuation of breast-feeding practices among mothers of children between 6 months to 23 months
2. To study the complementary feeding practices
3. To evaluate the various indicators of infant and young child feeding practices

Methodology: A cross-sectional descriptive study was conducted. The study population included the mothers of children between 6 months to 23 months attending tertiary care hospitals attached to Bangalore Medical College and Research Institute, Bengaluru.

A preformed questionnaire mainly based on the standard question naire on IYCF practices given by WHO was used for data collection.

Results: 32.5% of the infants were initiated on early breastfeeding. 75.9% children were exclusively breastfed for first 6 months of life. The minimum meal frequency was observed in 95.4% and 90.9% in children between 6-9 months and 9-23 months respectively. The Minimum dietary diversity was observed in 79.5% children and 79.5% received minimum acceptable diet.

Conclusion: Our study showed that the breastfeeding practices were sub optimal but the complementary feeding practices were reasonably better.

Keywords: Exclusive Breastfeeding, Dietary Diversity, Infant and young child feeding, Nutrition

Introduction

Every infant and child has the right to good nutrition. The first two years of life are of paramount significance as it serves as a critical period for the overall development of a child. The WHO and UNICEF recommend early initiation of breast feeding within 1 hour of birth and exclusive breast feeding for the first 6 months of life. The WHO recommends the introduction of nutrition ally adequate and safe complementary foods at 6 months together with continued breastfed up to 2 years of age and beyond ^[1].

However the actual rates of optimal feeding practices below expectations. Only 44% of infants aged 0-6 months worldwide were exclusively breastfed over the period of 2015-2020. About one-fifth of the overall under -five mortality can be prevented if 90% infants are covered with interventions to promote, protect and support the optimal Infant and young child feeding practices ^[1]. To support programmatic action and to contribute to monitoring progress on IYCF at national and global levels, indicators for assessing infant and young child feeding practices, are recommended ^[1]. These indicators have been recently updated in 2021 and have served as the standard for data collection and reporting on IYCF practices throughout the world.

This study aims at studying the patterns of infant and young child feeding practices, its indicators and the factors affecting these practices among the mothers of children between 6-23 months.

Objectives of the study

1. To assess the initiation and continuation of breast-feeding practices among mothers of children between 6 months to 23 months.

2. To study the complementary feeding practices.
3. To evaluate the various indicators of infant and young child feeding practices.

Methodology

Study design

This study is a cross sectional descriptive study.

Place of study

Tertiary care hospitals attached to Bangalore Medical College and Research Institute.

Data collection

After obtaining institutional ethical committee the data was collected using a preformed questionnaire mainly based on the standard questionnaire on IYCF practices recommended by WHO and sociodemographic factors. The inclusion criteria included mothers of children between 6 – 23 months attending Inpatient and Outpatient services and willing to participate in the study. The mothers of children who were critically ill or with congenital anomalies and not willing to participate in the study were excluded.

Statistical Analysis

The collected data was analyzed using IBM SPSS software ver.20. Kolmogorov-Smirnov test was used to determine the normality of the data.

Continuous variables are expressed in terms of Mean, Standard deviation (SD), Median, Interquartile range (IQR). Categorical variables are expressed in frequency (n) and percentage (%). CHI-SQUARE test and Univariate analysis was used to check the association between categorical variables.

Results

There were 83 participants in the study. Table I shows the sociodemographic profiles of mothers and children included in the study. 22(26.5%) children belonged to 6-9 months age group and 61(73.5%) belonged to 9-23

months age group. 48 of children (57.8%) were males and 35 (42.2) were females. Majority of the mothers (62.7%) belonged to age group of 19 – 25 years. 41% were educated up to high school, 32.5% till pre university, 12% till primary school, 9.6% were graduates and 4.8% were illiterates. 49.4% had first child and 50.6% had a birth order of ≥ 2 .

Table 1: sociodemographic factors

Sociodemographic profile		
	n	%
Age of the mothers (in years)		
<18	1	1.2
19 – 25	52	62.7
26 – 30	25	30.1
31 – 35	5	6.0
Age of the children (in months)		
6 – 9	22	26.5
9 – 23	61	73.4
Sex of the child		
Male	48	57.8
Female	35	42.2
SES of the mothers		
Class II	8	9.6
Class III	34	41.0
Class IV	29	34.9
Class V	12	14.5
Education status of mothers		
Illiterate	4	4.8
Primary School	10	12.0
High School	34	41.0
Pre university	27	32.5
Graduate	8	9.6
Type of delivery		
NVD	63	75.9

LSCS	20	24.1
Birth order		
1	41	49.4
≥ 2	42	50.6

Table 2 shows the breastfeeding indicators. In our study only 32.5% of the infants were initiated on early breast feeding. 71(85.5%) children were exclusively breastfed in the first 2 days of life. 63 (75.9%) children were exclusively breastfed for first 6 months of life. 66 (79.5%) were on continued breastfeeding.

Table 2: breastfeeding indicators

Breastfeeding indicators		
	N	%
Ever breastfed	83	100
Initiation of breastfeeding		
< 1 hour	27	32.5
1 - 4 hours	43	51.8
4 - 24 hours	8	9.6
> 24 hours	5	6.07
Exclusive breastfeeding for 2 days after birth	71	85.5
EBF for 6 months	63	
Breastfeeding		
Stopped < 6 months	0	0
Stopped < 1 year	7	8.4
Stopped between 1-2 years	10	10.8
Continued breastfeeding	66	79.5

Table 3 shows Feeding indicators. Out 22 breastfed children between 6 – 9 months and 44 breastfed children between 9 – 24 months, the minimum meal frequency was observed in 95.4% and 90.9% respectively. Out of 83 children, 17 were non breastfed children at the time of study and out of which 94.1% had minimum milk feeding frequency.

The Minimum dietary diversity was observed in 66 (79.5%) children. In our study 66 (79.5%) received minimum acceptable diet. Bottle feeding was observed in 32 (38.5%) children. Egg/flesh food consumption was seen

in 39(46.9%) children. Sweet beverage consumption was seen in 11 (13.2%) children. 38 (45.7%) children had unhealthy food consumption and 15(18.1%) children had zero vegetable/fruit consumption.

Table 3: complementary feeding indicators

Indicators	Yes (%)	No (%)	Total
Introduction of semisolid or soft foods at 6-8 months	81(97.5)	2(2.5)	83
Minimum meal frequency in breastfed children between 6-9 months (n=22)	21(95.4)	1(4.5)	22
Minimum meal frequency in breastfed children between 9-23 months (n=44)	40(90.9)	4(9.1)	44
Minimum milk feeding frequency for non-breastfed children between 6-23 months(n=17)	16(94.1)	1(5.8)	17
Minimum dietary diversity	66(79.5)	17(20.5)	83
Minimum acceptable diet	66(79.5)	17(20.5)	83
Egg/flesh food consumption between 6- 23 months	39(46.9)	44(53)	83
Sweet beverage consumption between 6- 23 months	11(13.2)	72(86.7)	83
Unhealthy food consumption between 6-23 months	38(45.7)	45(54.2)	83
Zero vegetable/fruit consumption between 6- 23 months	15(18.1)	68(81.9)	83
Bottle feeding	32(38.5)	51(61.4)	83

Discussion

In our study early breastfeeding was observed in only 32.5% of the infants. 63 (75.9%) children were exclusively breastfed for first 6 months of life. As per National Family Health Survey - 4 (NFHS-4) data at the national level showed proportion of early initiation as 41.5% and exclusive breastfeeding rate within 6 months as 56.60% [2]. Study conducted by Nakel et al in Maharashtra shows that 55.12% were put on breast-feeding within 1 hour of birth and 63.90% children were exclusively breast-fed for up to 6 months [3].

In our study, 66(79.5%) children were on continued breast feeding. This was comparable to the study conducted by Nakel et al which showed continued breast-feeding of 82.77% of children [3].

As per National Family Health Survey - 4 (NFHS-4) data only 22% of children between 6 – 23 months received minimum dietary diversity [2]. In our study the minimum dietary diversity was observed in 66 (79.5%) children. This was similar to study conducted by Singhal et al. with minimum dietary diversity of 79.6% in their study [4]. In a study conducted in Kerala by Bhatta thiryet et al, the minimum dietary diversity was present in 91.3% of children aged 6-23 months [5]. However lower prevalence was observed in studies by Dasgupta et al. (46%), Khan et al. (32.6%), Mukhopadhyay et al. (24. 4%) [6,7,8]

In our study 66 (79.5%) received minimum acceptable diet which was less when compared to the study conducted in Kerala by Bhattathiryet al, where 91.3% of children aged 6-23 months received a minimum

acceptable diet. Khanna et al. reported prevalence of MAD (65.95%)^[9].

Our study showed that 38 (45.7%) children had unhealthy food consumption. Biscuits were the most commonly eaten unhealthy food consumed followed by chips and chocolates.

Bottle feeding was observed in 32 (38.5%) children. This was comparable to the study conducted in Kerala Bhattathiry et al where bottle feeding was seen in 44% of total children studied^[5].

The proportion of newly added IYCF indicators like egg/ flesh food consumption was 46.9%, sweet beverage consumption was 13.2% and zero vegetable/ fruit consumption of 18.1% These indicators are assessed based on the consumption of the said food groups in the previous 24 hours in children between 6-23 months. The WHO guiding principles recommend that meat, poultry, fish or eggs should be eaten daily or as often as possible. They also advise against commercially prepared foods that are energy dense and nutrient poor^[11].

Conclusion

Our study showed that the breastfeeding practices were sub optimal but the complementary feeding practices were reasonably better when compared to other studies. The use of IYCF indicators help in effective assessment of infant and young child feeding practices.

Acknowledgement:

We are grateful to all the participants without whom the study would not have been possible.

We are immensely thankful to our Department and the college officials including Dean, Bangalore Medical College and Research Institute, Bengaluru for giving us the permission to conduct the study and supporting us throughout.

References

1. UNICEF. Infant and young child feeding practices [Internet]. World Health Organization. World Health Organization; 2021 [cited 2023Apr23]. Indicators for assessing infant and young child feeding practices: definitions and measurement methods. Geneva: World Health Organization and the United Nations Children's Fund (UNICEF), 2021. License: CC BY-NC-SA 3.0
2. (2017) National family health survey (NFHS-4), 2015-16: India. State fact sheet Maharashtra: International Institute for Population Sciences, Mumbai pp: 3.
3. Nakel MP, Naval SS, Mahajan SM, Salve SB. Study of Infant and Young Child Feeding (IYCF) Practices With Reference to IYCF Indicators among Mothers Attending Immunization Clinic at a Tertiary Care Hospital, Aurangabad (MS). *Indian J Nutri.* 2018; 5 (2): 188.
4. Singhal P, Garg SK, Chopra H, Jain S, Bajpai SK, Kumar A. Status of infant and young child feeding practices with special emphasis on breast feeding in an urban area of Meerut. *IOSR J Dent Med Sci.* 2013; 7:7-11.
5. Bhattathiry, M M and Santha Kumari. "A Study on the Infant and Young Child Feeding Practices among Mothers in A Selected Rural Area of Kollam, Kerala." *International Journal of Health Sciences and Research* 6 (2016): 26-30.
6. Dasgupta A, Naiya S, Ray S, Ghosal A, Pravakar R, Ram P. Assessment of infant and young child feeding practices among the mothers in a slum area of Kolkata: A cross sectional Study. *Int J Biol Med Res* 2014; 3: 38 55-61.
7. Khan AM, Kayina P, Agrawal P, Gupta A, Kannan AT. A study on infant and young child feeding practices

among mothers attending an urban health center in East Delhi. *Indian J Public Health* [serial online] 2012 [cited 2023 Mar 28]; 56:301-4.

8. Mukhopadhyay DK, Sinha Babu A, Saren AB, Biswas AB. Association of child feeding practices with nutritional status of under-two slum dwelling children: A community-based study from West Bengal, India. *Indian J Public Health* 2013; 57:169-72

9. Khanna A, Kadeangadi DM, Mallapur MD. Infant and young child feeding practices in rural Belgaum: A descriptive study. *Indian J Pract Dr.* 2014; 9:24-9.