

Original Research Article

A cross sectional study on infant and young child feeding practices: a keep for successful nutrition in under-five children attending rural Anganwadi centres, Mysuru

Divya K. L.¹, M. R. Narayana Murthy², K. Nimithamohan^{1*}, Amoghashree²

¹School of Public Health, JSS Medical College, Mysuru, Karnataka, India

²Department of Community Medicine, Mysuru, JSS Medical College, Karnataka, India

Received: 25 September 2022

Accepted: 26 October 2022

*Correspondence:

Dr. K. Nimithamohan,

E-mail: drknimitha@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Optimal infant and young child feeding practices (IYCF) are crucial for nutritional status, growth, development, health, and ultimately the survival of children. Even with several national schemes and programs in place, India's progress in tackling the problem of child malnutrition is slow. This study aims to estimate the prevalence of undernutrition and infant and young child feeding factors determining undernutrition among under five children in rural Mysuru.

Methods: A cross sectional study was conducted among under five children who are registered in Anganwadi centres in the rural field practice area of JSS Medical College. 261 children were chosen as per population proportionate to the size sampling technique.

Results: The mean age of the children was 2.8 ± 1.2 years and 86.6% belonged to Below Poverty Line households. 70.1% received breastfeeding within an hour of birth. Exclusive breastfeeding for 6 months was provided for 67.4% of the children. The prevalence of underweight, stunting, and wasting was 13.8%, 16.5%, and 5.7% respectively. The undernutrition among children was associated with the type of economic card and birth weight of the child.

Conclusion: IYCF is a key area to improve child survival and promote healthy growth and development. The study calls for attention to be placed on improving and promoting participatory nutrition education to raise awareness, health literacy, and foster behavioural change communication for improved child feeding and caring practices. Additionally, sociocultural determinants of feeding practices should be addressed in the design of nutritional interventions.

Keywords: Children, Infant and young child feeding, Rural, Undernutrition, Under five

INTRODUCTION

The nutritional well-being of a country is both an outcome and an indicator of its growth and development. In general, the health and nutrition of the population can be gauged from the nutritional status of children under the age of five.¹ Early childhood is one of the critical periods because it provides the foundation for subsequent cognitive, social and emotional development, language

acquisition, physical and motor growth, and cumulative lifelong learning. If the proper quantity or quality of nutrients is not consumed for an extended period, a person will have undernutrition.² Worldwide, around 149.2 million children under 5 are stunted, and 45.4 million children under 5 years suffer from wasting.³ Approximately, undernutrition causes 50 percent of deaths of children below the age of 5 years. Stunted growth can also be caused due to substandard

nourishment during the initial thousand days in the children's lives and often causes impairment of cognitive function as well as overall performance.⁴ Despite the country's economic expansion, both urban, as well as rural India, continues to report significant rates of undernutrition related deaths among children. The government of India has strongly committed to the achievement of the 2030 Sustainable Development Goal (SDG) 2 to "end hunger, achieve food security, improved health, and promote sustainable agriculture" by reducing child mortality and morbidity due to malnutrition.⁵

National family health survey-5 factsheet with varied nutritional statistics across different states of the country reported that the prevalence of underweight, stunting, and wasting amongst children aged below five years accounts to be 34.9%, 37.2%, and 20.1% respectively in rural areas of Karnataka state.⁶ Children who suffer from undernutrition, are being identified as a vulnerable group in need of targeted intervention.⁷ The nation's nutritional assessment acts as an acceptable method for collecting data to enable precise planning and implementation of measures to lower the morbidity and mortality linked to undernutrition. Anthropometric measures continue to be one of the most feasible methods for determining the nutritional status of a population.⁸ The first two years of life are particularly crucial since adequate nutrition at this time reduces the risk of chronic disease, lowers mortality, and promotes overall better development.⁹ Due to their high energy and protein requirements based on body weight as well as their particular sensitivity to illness, young children and infants are most affected.¹⁰

World health organization (WHO) recommends early initiation of breastfeeding within one hour of birth, exclusive breastfeeding for the first 6 months of age, avoiding any prelacteal feeds, and age-appropriate introduction of complementary foods at 6 months together with continued breastfeeding up to 2 years of age. Only a few children receive complementary foods that are safe and nutritionally adequate. Initiating breastfeeding within an hour of birth protects the baby from contracting illnesses and lowers neonatal mortality. Among infants who are partially breastfed or not breastfed at all, the risk of mortality due to diarrhoea and other infections is high. Breast milk also serves as an important source of energy and nutrients in children under the age of 2 years.¹¹ Foetal growth restriction caused by maternal undernutrition raises the possibility of neonatal mortality and, among the survivors, it is likely to cause stunting by the age of two. In developing nations, optimal breastfeeding – that is, breastfeeding within an hour of birth, exclusive breastfeeding for 6 months, and continued breastfeeding until age 2 years or longer has the potential to prevent 12 % of all deaths in under 5s.¹² Millions of children throughout the world suffer from disabilities due to various underlying factors, including malnutrition. Any abnormality in the adequacy of nutrition during the stages of development may cause disability.¹³ Children's nutrition is also greatly influenced

by the environment that is shared amongst the families, including traditions, values, and other shared beliefs.¹⁴ The integrated child development scheme (ICDS) takes a holistic approach to nutrition and health, as well as provides early chances for cognitive and social stimulation. Children aged 3-6 years get freshly prepared food supplements at all Anganwadi centres, while children aged 6 months to 3 years receive monthly take home rations of food grains.⁷ Even though several intervention initiatives are in place in India, the burden of undernutrition among children under the age of five has not improved much.¹⁵ It is possible to end the cycle of malnutrition and poverty by expanding access to ICDS and improving its quality. It is a crucial step in achieving children's fundamental rights to health, nutrition, and education.⁸ It is also critical to understand the prevalence rates of undernutrition in children under the age of 5 to assess the general health of the community. Additionally, it offers information for setting health priorities by health policymakers.¹ Malnutrition is not only a problem in cities, but it also affects children in rural areas. As a result, early detection and modification of risk factors can help to protect children from developing complications, lowering morbidity and mortality. With this background, the study intended to estimate the prevalence of undernutrition and infant and young child feeding practices affecting undernutrition amongst children attending the Anganwadi centres in the rural field practice areas of JSS Medical College, Mysuru.

METHODS

A cross sectional study was conducted for a period of six months from January to June 2022 in the Anganwadi centres in the rural field practice area of JSS Medical College, Mysuru. The sample size was calculated from the prevalence of undernutrition (underweight, stunting, and wasting) of 19.06% from a previous study.¹⁶ Formulated on this, with 5% absolute precision and a 95% confidence interval, the sample size was calculated as 261, including the non-response rate. Necessary permission was taken from the child development project officer, rural Mysuru. The list of Anganwadi centres in the rural field practice area was obtained. The Anganwadi teacher was contacted on the previous day of the visit and informed regarding the study. The number of children to be included from the Anganwadi centres was calculated based on the probability proportionate to the size sampling technique. After visiting the Anganwadis of the villages, children satisfying the inclusion criteria were included until the desired sample size was obtained.

Inclusion and exclusion criteria

Children within the age group of 6 months to 5 years, registered or attending the Anganwadi centres, and whose parents provided consent were included in the study. Children with congenital anomalies and children whose parents didn't consent to the study participation were excluded from the study.

Data collection and analysis

Data was collected using a pretested semi-structured questionnaire from the mothers of the study participants. Sociodemographic details, pregnancy, and birth-related factors, infant and child feeding practices, and anthropometric measurements were recorded. WHO Anthro plus app was used for calculating the Z-scores for the nutritional assessment of the study participants. Data were entered and coded in an MS Excel spreadsheet and later imported and analyzed using SPSS software (version 25). Chi-square test or Fisher exact test were used to test the significance wherever indicated, p value less than 0.05 was considered statistically significant.

RESULTS

A total of 261 children aged 6 months to 5 years were included for the study. The mean age of was 2.8 ± 1.2 years. The sociodemographic profile of the under five children who participated in the study is depicted in (Table 1).

Table 1: Sociodemographic characteristics of under-five children in rural Mysuru (n=261).

Sociodemographic variables	Categories	N (%)
Age of the child (years)	<3	121 (46.4)
	3-5	140 (53.6)
Gender	Male	143 (54.8)
	Female	118 (45.2)
Type of family	Nuclear family	88 (33.7)
	Joint family	58 (22.2)
	Three-generation family	115 (44.1)
Type of economic card	Above poverty Line	24 (9.2)
	Below poverty Line	226 (86.6)
	None	11 (4.2)
Socio-economic class according to modified BG prasad scale	Upper class	42 (16.1)
	Middle class	78 (29.9)
	Lower class	141 (54)
Age of mother (years)	≤25	117 (44.8)
	26-30	115 (44.1)
	>31	29 (11.1)
Education of mother	Illiterate	5 (1.9)
	Attended schooling	136 (52.1)
	Diploma and above	120 (46)
Occupation of mother	Home-maker	244 (93.5)
	Employed	17 (6.5)

Total 53.6% of the study participants were in the age group of 3-5 years. Among the under five children, 54.8% were males and 45.2% were females. 44.1% belonged to three generation family and 86.6% of the children family were below poverty line (BPL) card holders. About 54%

of children belonged to lower socioeconomic class while 16.1% belonged to upper class according to modified BG prasad socioeconomic scale. Mothers of majority of the children (44.8%) were of less than 26 years of age. In relation to the literacy level, mothers who attended some schooling was 52.1% whereas 1.9% were illiterates. Majority of the mothers of children were homemakers (93.5%). The infant and young child feeding practices among the participants is depicted in (Table 2).

Table 2: Infant and young child feeding practices among the study participants (n=261).

IYCF practices	Categories	N (%)
Early initiation of breastfeeding within an hour of delivery	Yes	183 (70.1)
	No	78 (29.9)
Colostrum fed	Yes	242 (92.7)
	No	19 (7.3)
Exclusive breastfeeding for 6 months	Yes	204 (78.2)
	No	57 (21.8)
Till what age breastfeeding was given (N=230) (years)	<1	26 (11.3)
	>1	204 (88.7)
Bottle feeding	Yes	64 (24.5)
	No	197 (75.5)
Birth weight of the child (kg)	<2	6 (2.3)
	2-2.5	24 (9.2)
	2.5-4	217 (83.1)
	>4	14 (5.4)

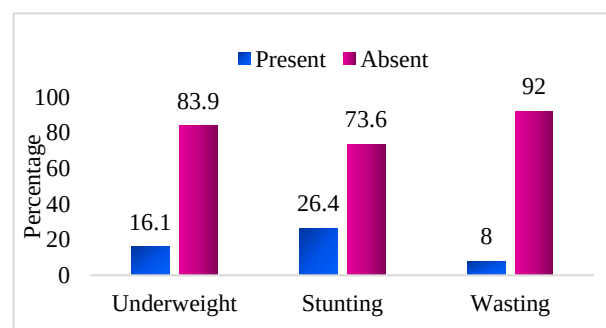


Figure 1: Undernutrition prevalence among under five children in rural Mysuru.

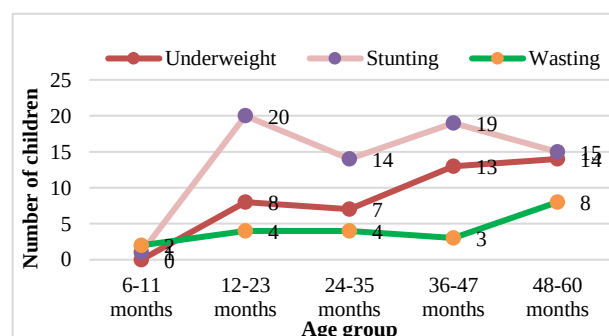


Figure 2: Undernutrition prevalence indicators according to age group in months.

Table 3: Comparison of sociodemographic factors with undernutrition.

Variables	Underweight		Stunting		Wasting	
	Present	Absent	Present	Absent	Present	Absent
Age of the child (years)						
<3	14 (11.6)	107 (88.4)	35 (28.9)	86 (71.1)	10 (8.3)	111 (91.7)
3-5	28 (20)	112 (80)	34 (24.3)	106 (75.7)	11 (7.9)	129 (92.1)
	p=0.065*		p=0.397*		p=0.904*	
Gender						
Male	22 (15.4)	121 (84.6)	36 (25.2)	107 (74.8)	10 (7)	133 (93)
Female	20 (16.9)	98 (83.1)	33 (28)	85 (72)	11 (9.3)	107 (90.7)
	p=0.732*		p=0.611*		p=0.491*	
Type of family						
Nuclear family	15 (17)	73 (83)	24 (27.3)	64 (72.7)	9 (10.2)	79 (89.8)
Three-generation family	17 (14.8)	98 (85.2)	28 (24.3)	87 (75.7)	6 (5.2)	109 (94.8)
Joint family	10 (17.2)	48 (82.8)	17 (29.3)	41 (70.7)	6 (10.3)	52 (89.7)
	p=0.877*		p=0.765*		p=0.329*	
Type of economic card						
None	3 (27.3)	8 (72.7)	5 (45.5)	6 (54.5)	0	11 (100)
APL card	0	24 (100)	4 (16.7)	20 (83.3)	0	24 (100)
BPL card	39 (17.3)	187 (82.7)	60 (26.5)	166 (73.5)	21 (9.3)	205 (90.7)
	p=0.023**		p=0.199*		p=0.253**	
Age of mother (years)						
≤25	14 (12)	103 (88)	35 (29.9)	82 (70.1)	9 (7.7)	108 (92.3)
26-30	22 (19.1)	93 (80.9)	26 (22.6)	89 (77.4)	8 (7)	107 (93)
>30	6 (20.7)	23 (79.3)	8 (27.6)	21 (72.4)	4 (13.8)	25 (86.2)
	p=0.257*		p=0.446*		p=0.473*	
Education of mother						
Illiterate	2 (40)	3 (60)	3 (60)	2 (40)	1 (20)	4 (80)
Attended schooling	26 (19.1)	110 (80.9)	40 (29.4)	96 (70.6)	9 (6.6)	127 (93.4)
Diploma and above	14 (11.7)	106 (88.3)	26 (21.7)	94 (78.3)	11 (9.2)	109 (90.8)
	p=0.071**		p=0.078**		p=0.268**	
Occupation of mother						
Home-maker	38 (15.6)	206 (84.4)	65 (26.6)	179 (73.4)	18 (7.4)	226 (92.6)
Employed	4 (23.5)	13 (76.5)	4 (23.5)	13 (76.5)	3 (17.6)	14 (82.4)
	p=0.490**		p=1.000*		p=0.146**	

*Chi-square test, **Fisher exact test

Early initiation of breastfeeding within an hour of birth was done by 70.1% of the mothers while 29.9% had not initiated breastfeeding with their child within an hour of birth. The majority of children were fed colostrum by their mothers (92.7%). The birth weight of a newborn is linked to mortality risk during the initial years, and nearly 83.1% of children had a normal birth weight of 2.5 to 4 kg whereas 2.3% of the children had extremely low birth weight. Only 78.2% had exclusively breastfed their child for the first complete 6 months. Bottle feeding was given to 24.5% of the children in the present study. From (Figure 1), it can be seen that the prevalence of underweight, stunting and wasting were 16.1%, 26.4%, and 8% respectively among under five children. The undernutrition indicators in relation to age group of children in months is depicted in (Figure 2). The prevalence of underweight had a steep rise as age increases and was high among age group of 48-60 months. The prevalence of stunting was peak at 12-23 months of age while wasting was at peak at 48-60

months. The association between sociodemographic variables and undernutrition is depicted in (Table 3). The rate of underweight (20%) was higher among children aged 3-5 years, whereas stunting (28.9%) and wasting (8.3%) were higher among children aged less than 3 years. A higher prevalence of undernutrition was found among females than males in the present study, though the age and gender variables were not statistically significant. The prevalence of undernutrition was higher among those living in a joint family with no statistically significant association. Underweight was higher among those who didn't own any type of economic card in the household and this was significantly associated. The proportion of underweight (40%) and stunting (60%) was higher among the children whose mothers were illiterates than those with minimum education level, but this difference was not statistically significant. A higher prevalence of underweight (23.5%) was seen among children whose mothers were homemakers, but this was not statistically significant. The comparison of IYCF

practices in relation to undernutrition is depicted in (Table 4). The prevalence of underweight (16.7%) and

wasting (11.5%) was much lower among those children who were given breastfeeding within an hour of delivery.

Table 4: Comparison of IYCF practices with undernutrition.

Variables	Underweight		Stunting		Wasting	
	Present	Absent	Present	Absent	Present	Absent
Early initiation of breastfeeding within an hour of delivery						
Yes	29 (15.8)	154 (84.2)	49 (26.8)	134 (73.2)	12 (6.6)	171 (93.4)
No	13 (16.7)	65 (83.3)	20 (25.6)	58 (74.4)	9 (11.5)	69 (88.5)
	p=0.869*		p=0.849*		p=0.176*	
Colostrum fed						
Yes	38 (15.7)	204 (84.3)	65 (26.9)	177 (73.1)	19 (7.9)	223 (92.1)
No	4 (21.1)	15 (78.9)	4 (21.1)	15 (78.9)	2 (10.5)	17 (89.5)
	p=0.520**		p=0.580*		p=0.656**	
Exclusive breastfeeding for 6 months						
Yes	33 (16.2)	171 (83.8)	54 (26.5)	150 (73.5)	15 (7.4)	189 (92.6)
No	9 (15.8)	48 (84.2)	15 (26.3)	42 (73.7)	6 (10.5)	51 (89.5)
	p=0.944*		p=0.981*		p=0.418**	
Till what age breastfeeding was given (years) (N=230)						
<1	1 (3.8)	25 (96.2)	6 (23.1)	20 (76.9)	2 (7.7)	24 (92.3)
>1	35 (17.2)	169 (82.8)	53 (26)	151 (74)	17 (8.3)	187 (91.7)
	p=0.090**		p=0.750*		p=1.000**	
Bottle feeding						
Yes	6 (9.4)	58 (90.6)	16 (25)	48 (75)	4 (6.3)	60 (93.8)
No	36 (18.3)	161 (81.7)	53 (26.9)	144 (73.1)	17 (8.6)	180 (91.4)
	p=0.092*		p=0.764*		p=0.543*	
Birth weight of the child (kg)						
<2	1 (16.7)	5 (83.3)	2 (33.3)	4 (66.7)	0	6 (100)
2-2.5	9 (37.5)	15 (62.5)	11 (45.8)	13 (54.2)	2 (8.3)	22 (91.7)
2.5-4	30 (13.8)	187 (85.7)	54 (24.9)	163 (75.1)	18 (8.3)	199 (91.7)
>4	2 (14.3)	12 (85.7)	2 (14.3)	12 (85.7)	1 (7.1)	13 (92.9)
	p=0.032**		p=0.100**		p=1.000**	

*Chi-square test, **Fisher exact test

Underweight (21.1%) was higher among those children who were not fed with colostrum. Though the early breastfeeding initiation and colostrum feeding were not significant with undernutrition. The prevalence of underweight (16.2%) and stunting (26.5%) was much higher among children who were given exclusive breastfeeding and it was not statistically significant. This can be due to other associated dietary factors. The prevalence of undernutrition was higher among those children who had a low birth weight, and there was a statistically significant association between the birth weight of the child and weight for age.

DISCUSSION

Nutritional status affects the child's overall growth and development. The present study thus tried to explain the undernutrition in terms of underweight, stunting, and wasting. The study was conducted in the rural area of Mysuru among 261 children aged 6 months to 5 years register or attending Anganwadi centres. Prevalence of stunting and underweight was 26.4% and 16.1% respectively while wasting was only 8%. The prevalence of stunting was more than that of wasting and

underweight, which can be due to chronic nutrition related problems. Present study findings were comparable to the findings from the study conducted by Khobragade et al in a rural area of central India, where the prevalence of stunting was 35%, underweight was 15.8% and wasting was 6.4%.¹⁶ Another study by Priyanka R et al found the prevalence of underweight and stunting among under-fives to be 28.3% and 14% respectively.¹⁷ The findings of the National family health survey factsheet 5 of Karnataka found underweight, stunting, and wasting to be 34.9%, 37.2%, and 20.1% respectively.⁶ The present study found a high prevalence of stunting at 12-23 months of age while wasting was at 48-60 months. Underweight was found to be high (20%) among those children between the age of 48-60 months, though it was not significant. A higher prevalence of undernutrition was found among females than males in the study with no significance. Jain et al conducted a study in a rural area, reported the prevalence of undernutrition to be higher in females than males, and found it to be statistically significant to undernutrition.¹⁸ The prevalence of undernutrition was higher among those living in a joint family with no statistical significance. This can be due to the increase in number of members in the family to less

time spent with the child and its feeding habits. The present study found a significant association between type of economic card and underweight which was similar to a study by Khobragade et al which was also significant.¹⁶ In the study, no statistical significant association between maternal education and nutritional status of the children. This finding is similar to Priyanka et al which found mother education was not significantly associated with underweight and stunting.¹⁷ Thus education of the mother, awareness and knowledge about breastfeeding and nutritional food is important to have a healthy child.

Breastfeeding is an important source of complete nutrition for a new born. Among children who received early breastfeeding within an hour, the prevalence of stunting and underweight are lower but not significant compared to previous studies where the association was statistically significant.¹⁹ In the study, underweight was more among those who were exclusively breastfed for 6 months. In contrast to our study, Nirmalson et al found a higher prevalence among those who were not given breastfeeding was statistically significant.²⁰ Among 230 children, who were given breastfeeding for less than a year, 3.8% were underweight and 23.1% were stunted. 9.4% of children were bottle fed and had a lower weight for age, and the association was not statistically significant. In the present study, underweight was significantly higher among those children with a birth weight of less than 2.5 kg. These findings are in accordance with the study done by Dhathrak et al, Jain et al, and Purohit et al.^{14,18,21} This result shows that who were born underweight tend to grow with the poor weight and falls under category of undernutrition.

Limitations

The study's cross-sectional design makes it impossible to elicit the underlying reasons and mechanisms of the high degree of malnutrition among children because it only provides a single snapshot of the group under consideration. Some other factors that may directly contribute to childhood undernutrition were not explored in detail. This opens a possibility of an exploratory study in the concerned field and subject. There can be a possibility for recall bias of the mothers on the infant and young child feeding practices of their child. Also, the study was conducted in a rural field practice area of a medical college and so, lacks generalisability of the study findings to the other rural areas.

CONCLUSION

IYCF is a key area to improve child survival and promote healthy growth and development. Antenatal counselling individually or in groups organized by health centres should prepare expectant mothers for successful breastfeeding. This study also calls for attention to be placed on improving and promoting participatory nutrition education to raise awareness, health literacy, and foster behavioural change communication for improved

child feeding and caring practices. Due emphasis should be given to strengthening the existing national programs and assure their effective implementation at all levels. Additionally, sociocultural determinants of feeding practices should be addressed and incorporated into the design of nutritional interventions.

ACKNOWLEDGEMENTS

Authors would like to acknowledge the mothers and their children who participated in the study. Authors express their gratitude to the child development project officer, rural Mysuru, and the Anganwadi supervisor, Mrs. Sunitha for their help and coordination of Anganwadi visits. Authors thank the staff of Anganwadi centres for their kind cooperation during the visits. Authors specially thank the community medicine department and staff of JSS Medical college for their constant guidance and support.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Sulaiman A, Bushara S, Elmadhoun W, Noor S, Abdelkarim M, Aldeen I, et al. Prevalence and determinants of undernutrition among children under 5-year-old in rural areas: A cross-sectional survey in North Sudan. *J Family Med Prim Care*. 2018;7(1): 104.
2. Sathyanath MS, Rashmi R, Kiran NU. Prevalence and risk factors of under nutrition among under five children in a rural community. *J Health Allied Sci*. 2013;03(04):82-6.
3. The UNICEF/WHO/WB Joint Child Malnutrition Estimates (JME) 2021 edition-Levels and trends in child malnutrition.pdf. Available at: <https://apps.who.int/iris/handle/10665/341135/pdf>. Accessed on 4 June 2022
4. Childhood Malnutrition in India. Available at: <https://www.perspective-of-recentadvances-in-acute-diarrhea/childhood-malnutrition-in-india>. Accessed on 7 June 2022.
5. Murarkar S, Gothankar J, Doke P, Pore P, Lalwani S, Dhumale G, et al. Prevalence and determinants of undernutrition among under-five children residing in urban slums and rural area, Maharashtra, India: a community-based cross-sectional study. *BMC Public Health*. 2020;20(1):1551-9.
6. National Family Health Survey-5. 2019-20 - Karnataka State fact sheet. Available at: http://rchiips.org/nfhs/NFHS-5_FCTS/Karnataka.pdf. Accessed on 17 June 2021.
7. Silva VGP, Silva SGP. Nutritional Status of anganwadi children under the integrated child development services scheme in a rural area in Goa. *BMC Public Health*. 2015;3(7):5.

8. Moluguri A, Gayathry D, Gurnule S. A study on health and nutritional status of children in rural and urban ICDS projects in Karimnagar. *Int J Community Med Public Health*. 2019;6(4):1747.
9. Meshram II, Mallikharjun Rao K, Balakrishna N, Harikumar R, Arlappa N, Sreeramakrishna K, et al. Infant and young child feeding practices, sociodemographic factors and their association with nutritional status of children aged <3 years in India: findings of the National Nutrition Monitoring Bureau survey, 2011–2012. *Public Health Nutr*. 2019;22(1): 104-14.
10. Kumari P. Prevalence of protein energy malnutrition among under-five children belonging to rural areas of Ambala, Haryana, India. *J Health Allied Sci*. 2017;8: 34-9.
11. Infant and young child feeding- WHO factsheet. Available at: <https://www.who.int/news-room/factsheets/detail/infant-and-young-child-feeding>. Accessed on 24 August 2022.
12. Black RE, Victora CG, Walker SP, Bhutta ZA, Christian P, Onis M de, et al. Maternal and child undernutrition and overweight in low-income and middle-income countries. *Lancet*. 2013;382(9890): 427-51.
13. De P, Chattopadhyay N. Effects of malnutrition on child development: Evidence from a backward district of India. *Clin Epidemiol Global Health*. 2019;7(3): 439-45.
14. Dhatrik PP, Pitale S, Kasturwar NB, Nayse J, Relwani N. Prevalence And Epidemiological Determinants of Malnutrition Among Under-Fives in An Urban Slum, Nagpur. *Nat J Commu Med*. 2013;4(01):91-5.
15. Sahu SK, Kumar SG, Bhat BV, Premarajan KC, Sarkar S, Roy G, et al. Malnutrition among under-five children in India and strategies for control. *J Nat Sci Biol Med*. 2015;6(1):18-23.
16. Khobragade AW, Yadav RG. Nutritional status of under five children attending Anganwadi in rural area of central India. *Int J Community Med Public Health*. 2020;7(12):5165.
17. Vincent V, Saju C. An assessment of the nutritional status of underfive children in a rural area of Thrissur district, Kerala, India. *Int J Community Med Public Health*. 2016;3479-86.
18. Jain M, Bhati JS, Jain M, Kumar V, Garg K, Gupta PK. Nutritional status of children under five year of age: a cross sectional study in rural area of Jhalawar, Rajasthan. *Int J Community Med Public Health*. 2019; 6(8):3321.
19. Gaidhane A, Dhakate P, Patil M, Zahiruddin QS, Khatib N, Gaidhane S, et al. Determinants of stunting and wasting among the children under five years of age in rural India. *IJCRR*. 2021;13(11):18-26.
20. Nirmalson SP, Vijayakarhikeyan M. Assessment of Nutritional status and its determinants among fewer than 5 children in a rural area of southern India. *Natl J Community Med*. 2022;13(05):287-93.
21. Purohit L, Sahu P, Godale LB. Nutritional status of under- five children in a city of Maharashtra: a community based study. *Int J Community Med Public Health*. 2017;4(4):1171.

Cite this article as: Divya KL, Murthy MRN, Nimithamohan K, Amoghashree. A cross sectional study on infant and young child feeding practices: a keep for successful nutrition in under-five children attending rural Anganwadi centres, Mysuru. *Int J Community Med Public Health* 2022;9:4166-72.