ORIGINAL ARTICLE

Awareness, perception and practices regarding Breast-Feeding and IYCF Practices among mothers of Children Up to 2 Years in Two Districts of Central India: A Cross-Sectional Study

Sanjay Silawat[1], Vishwambhar Puri Goswami[2], Shailesh Rai[3], Ayushi Shrivastava[4], Shivam Dixit[5], Gourav Silawat[6]

[1-5]Department of Community Medicine, M.GM Medical College & MYH Hospital, Indore, Madhya Pradesh
[6]Department of IHBT, M.GM Medical College & MYH Hospital, Indore, Madhya Pradesh

CORRESPONDING AUTHOR
Mr. Shivam Dixit, Assistant Professor, Department of Community Medicine, M.GM Medical College & MYH Hospital, Indore, Madhya Pradesh 452001
Email: dixit.shivam2007@gmail.com

CITATION
Silawat S, Goswami VP, Rai S, Shrivastava A, Dixit S, Silawat G. Awareness, perception and practices regarding Breast-Feeding and IYCF Practices among mothers of Children Up to 2 Years in Two Districts of Central India: A Cross-Sectional Study. Indian J Comm Health. 2024;36(2):264-271.
https://doi.org/10.47203/IJCH.2024.v36i02.017

ARTICLE CYCLE
Received: 04/09/2023; Accepted: 12/03/2024; Published: 30/04/2024

ABSTRACT

Background: Breastfeeding is an absolute necessary intervention for childhood survival. WHO/UNICEF have given utmost emphasis on first 1000 days of life comprising of 270 days in-utero and the first two years post birth as most vital period for nutritional interventions. [1] Infant and Young Child Feeding (IYCF) is a set of renowned and usual recommendations for appropriate feeding of new-born and children below two years of age. **Aims & Objectives**: To assess the awareness, perception and practices, regarding breast-feeding and IYCF practices among mothers of children up to 2 years, in two districts of Central India. **Settings and Design**: Cross Sectional Study. **Materials and Methods**: This Cross-sectional study was carried out in two districts of Central India from January 2021 to December 2021. The study subjects included 400 mothers of babies less than two years old, who had given consent. Interpersonal interview using a pre-designed semi-structured questionnaire was carried out. Data was collected, compiled and analysed using SPSS 25.0 (Trial Version). **Result**: Only (58.60%) of respondents were completely knowledgeable about exclusive breastfeeding, the value of colostrum feeding, the advantages of breastfeeding (81.69%), and its early onset (64.75%), duration (71.25%), and frequency (74.50%). However, 50.25% of women lacked understanding about the ideal positioning and attachment of the infant to the breast. **Conclusion**: All beneficiaries should be shown demonstrations of all IYCF practices. Family members should also be counselled and encouraged to support IYCF practices.

KEYWORDS
IYCF, breast-feeding, complementary feed

INTRODUCTION

Breastfeeding is an absolute necessary intervention for childhood survival. WHO/UNICEF have given utmost emphasis on first 1000 days of life comprising of 270 days in-utero and the first two years post birth as most vital period for nutritional interventions. (1) 20 per cent of new born deaths could be prevented by breastfeeding within an hour of delivery. Exclusively breastfed babies during 0-6 months of age have 11 times less risk of death from diarrhoea and 15 times less risk from that of pneumonia, both being the two leading causes of under-5 mortality rate. (1) According to NFHS-4 (2015-2016) data, only 41.6% children under the age of 3 years were breastfed within one hour of birth, 54.9% children under 6 months were exclusively breastfed, 42.7% children aged 6-8 months were receiving solid or semi-solid food and breast milk. (2) With such low rates of child feeding practices, infant and young child nutrition needs utmost attention to prevent and reduce malnutrition. Infant and Young Child Feeding (IYCF) is a set of renowned and usual recommendations for appropriate feeding of new-born and children below two years of age. ASHA has been a connecting link in spreading awareness to the communities and thus has contributed towards improved breastfeeding rates. Therefore It is essential to know the reasons of low Breast feeding rates & IYCF practices at the level of beneficiaries (mothers), so as to prevent morbidity and mortality in under-5 children.

MATERIAL & METHODS

This Cross-sectional study was carried out in two districts of Central India by the Department of Community Medicine, MGM Medical College & MY Hospital, Indore, M.P., after approval by Institutional Ethics Committee, over a period of 1 year. The study subjects included mothers of babies less than two years old, who had given consent.

Based on the formula n = Z2pq / d2; taking expected prevalence (p) as 50%; and margin of error (d) as 5%, the sample size was calculated to be 400. Hence, 200 samples from each district were taken. Using the multistage random sampling method, two CHCs were selected from each district; two PHCs under each CHC; two Sub-centres under each PHC; and two villages under each Sub-centre were selected. 20 mothers from each CHC, 10 from each PHC, and 5 mothers from each Sub-centre, as well as, villages were included in the study, thus, totalling it to 200 mothers from each district. After taking informed consent from the mothers, interpersonal interview using a pre-designed semi-structured questionnaire was carried out.

Statistical Analysis: Data was collected, coded appropriately and compiled in MS Excel spread sheet. Continuous data was expressed in mean and standard deviation. The graphical representation of data was done using figures and tables. Analytical part was done using appropriate tests of association. Chi-square test using SPSS 25 (trial version) software was applied wherever necessary. The level of significance was fixed at 95%. p-value < 0.05 was considered statistically significant.

RESULTS

The socio-demographic characteristics of mothers have been depicted in Figure 1. Majority of the mothers interviewed belonged to the age group of 18-27 years (52%) and 28-37 years (42.8%). The mean age was 27.5 years. Most were educated till middle school (24.5%), while 22.3% were illiterate. A large proportion (77.3%) were housewives/unemployed. Figure 2 depicts the characteristics of the babies up to 2 years. 91.6% were infants, 53.3% were females, 95.5% were term, 88.8% were delivered at an institution and 68.5% were delivered vaginally, 87.5% weighed >2.5 kg; and 68.3% were of birth order one. Knowledge of mothers regarding the IYCF breast feeding practices was assessed (Table 1). Majority had complete knowledge about exclusive breast-feeding (58.60%), importance of feeding colostrum (80.40%); benefits of breast-feeding (81.69%), its early initiation (64.75%), duration (71.25%) and frequency (74.50%). However, it was noteworthy that 50.25% mothers did not have knowledge regarding proper position and attachment of the baby to the breast, and 30.75% did not know they could feed their

child after LSCS even if unable to sit. Also, 31.25% did not have knowledge regarding initiation of complementary feeding. Assessment of the attitude of mothers regarding IYCF breast feeding practices was also carried out (Table 2). Though majority agreed that breast-feeding was useful for the babies' growth and development, 2.75% disagreed with the fact, due to lack of proper knowledge. 28.75% felt anxious/ stressed while breast-feeding their babies. 97% felt confident of handling the baby after breast-feeding and 99% accepted that it helped to increase bonding with their baby. Majority (98.25%) agreed that complementary food was necessary for proper growth and development of the baby after 6 months of age. The practices of mothers have been depicted in Table 3. Majority (54.8%) beneficiaries breast-fed their babies for 8-12 hours and each feed lasted for 15-30 minutes in 63.75% cases. Of 74.5% who received help from family members, 47.31% received it from their mothers-in-law. It was worth noting that 45% of the mothers practiced giving pre-lacteal feed to the baby before breast-feeding, which included top milk (59.44%), water (13.89%), jaggery water (10.56%) and other items (16.11%). Majority (64%) of the mothers exclusively breast-fed babies from 0-6 months, and 53% continued breast-feeding their babies till the age of 1-2 years. On asking if baby cries during breast feeding 76% answered yes. 60% made their baby burp after feeding. It was observed that majority (60%) mothers placed the baby in correct position, and 56.5% practiced proper attachment during breast feeding. Among housewives, 65.37% mothers practiced exclusive breastfeeding, however, only 38.46% of the working mothers could practice the same (p-value<0.0001; significant), as depicted in Table 4. 34.35% of the illiterate mothers did not practice exclusive breast-feeding; and the association between education and exclusive breast-feeding practices was found significant (p-value<0.0001). The association between occupation and duration of breast-feeding (Table 5) was also found significant (p-value<0.0001), wherein, 58.25% mothers who were housewives continued to breast-feed their babies up to 1-2 years. Figure 3 suggests that maternal health problems (27.25%) and baby sickness (25.25%) were the common barriers associated with breast-feeding.

Figure 1: Socio-demographic characteristics of mothers of children up to 2 years

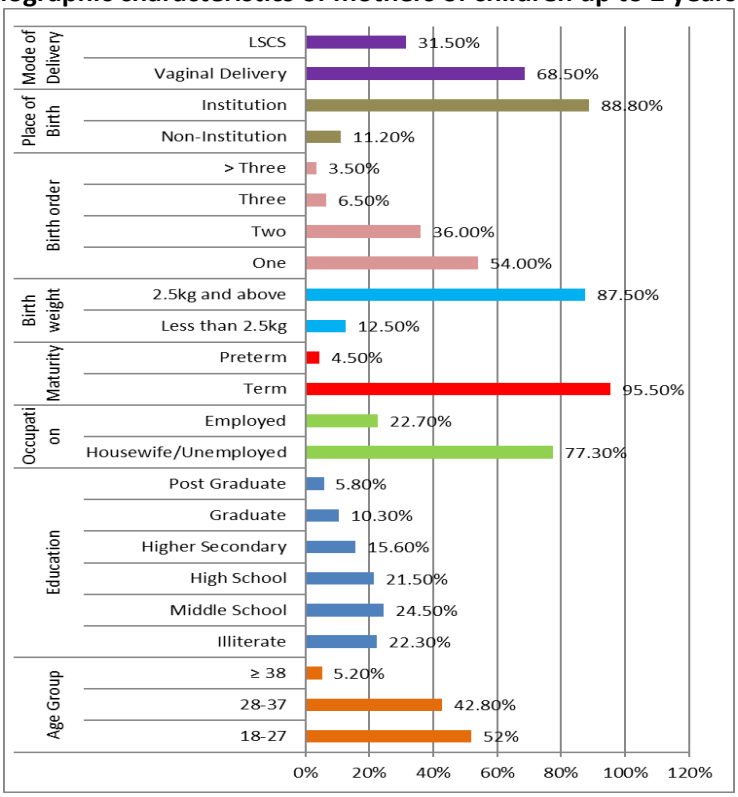


Figure 2: Characteristics of children up to 2 years

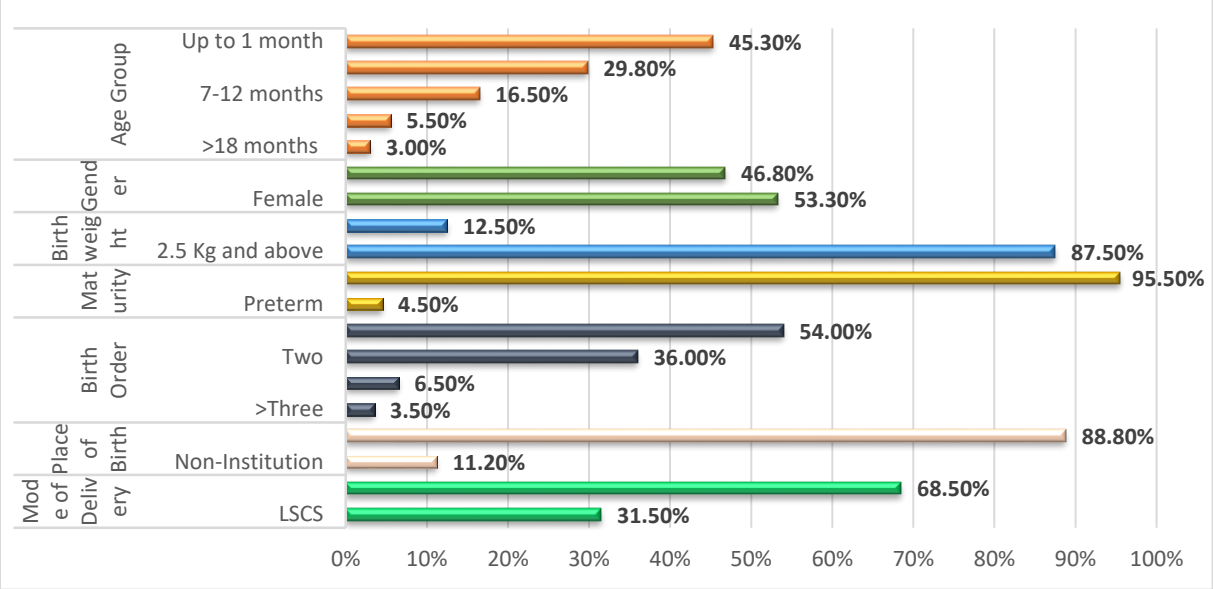


Table 1: Assessment of Knowledge regarding IYCF practices among mothers (n=400)

Knowledge of	No knowledge N (%)	Partial knowledge N (%)	Complete knowledge N (%)
Exclusive breastfeeding	44 (11%)	122 (30.5%)	234 (58.6%)
Importance of colostrum feeding	25 (8.30%)	34 (11.30%)	242 (80.40%)
Benefits of breast feeding	15 (5.08%)	39 (13.23%)	241 (81.69%)
Early initiation of breast feeding	63 (15.75%)	78 (19.50%)	259 (64.75%)
Initiation of complementary feeding	125 (31.25%)	65 (16.25%)	210 (52.50%)
Duration of breast feeding	50 (12.50%)	65 (16.25%)	285 (71.25%)
Frequency of breast feeding	30 (7.5%)	72 (18%)	298 (74.50%)
Infection prevented by breastfeeding	58 (14.50%)	123 (30.75%)	219 (54.75%)
Breast feeding by LSCS mother with other illness	123 (30.75%)	42 (10.50%)	235 (58.75%)
Proper attachment	201 (50.25%)	45 (11.25%)	154 (38.50%)

Table 2: Assessment of Attitude regarding IYCF breast feeding practices among mothers (n=400)

Attitude		**Response**				
		Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
Usefulness of breast feeding is for babies' growth & development	Frequency	167	219	3	10	1
	Percentage	41.75%	54.75%	0.75%	2.50%	0.25%
Feeling of mother during breastfeeding	Frequency	149	238	10	3	0
	Percentage	37.25%	59.50%	2.50%	0.75%	0.00%
Anxiety or stressed while giving breastfeeding	Frequency	48	67	103	164	18
	Percentage	12%	16.75%	25.75%	41%	4.5%
Level of confidence of handling the baby after breastfeeding	Frequency	138	250	7	5	0
	Percentage	34.50%	62.50%	1.75%	1.25%	0.00%
Breast feeding helps to increase mother-baby bonding	Frequency	156	240	2	2	0
	Percentage	39.00%	60.00%	0.50%	0.50%	0.00%
Comfort during breast feeding	Frequency	150	243	3	4	0
	Percentage	37.50%	60.75%	0.75%	1.00%	0.00%
Recommend breast feeding to peer group of mothers	Frequency	162	234	4	0	0
	Percentage	40.50%	58.50%	1.00%	0.00%	0.00%
Complementary feed is necessary for proper growth & development after the age of 6 months	Frequency	120	273	2	3	2
	Percentage	30.00%	68.25%	0.50%	0.75%	0.50%

Table 3: Assessment of Practices regarding IYCF breast feeding among mothers (n=400)

Practice	Response	Frequency (n=400)	Percentage
Frequency of Breast feeding in a day	<8	18	4.5%
	8-12	219	54.8%
	12-18	157	39.3%
	≥18	6	1.5%
Duration of feeding of baby in each sitting	Less than 5 min	5	1.25%
	5-15 min	125	31.25%
	15-30 min	255	63.75%
	More than 30 min	15	3.75%
Seeking help of any family members during Breastfeeding	Yes	298	74.5%
	No	102	25.5%
Support of any family members during Breastfeeding	Husband	51	17.11%
	Mother-in-law	141	47.31%
	Other family members	54	18.12%
	Sister-in-law	52	17.45%
Satisfaction of baby during breast feeding i.e., Cry	Yes	304	76.0%
	No	96	24.0%
First feed / pre lacteal feed to the baby before breast feeding.	Yes	180	45.0%
	No	220	55.0%
Various first feed / pre lacteal feed.	Top milk	107	59.44%
	Water	25	13.89%
	Jaggery water	19	10.56%
	Others	29	16.11%
Practice for Exclusive breastfeeding	Yes	237	59.3%
	No	163	40.8%
Duration Exclusive breastfed to your baby.	1-6 months	256	64%
	6-12 months	121	30.2%
	12 -18 months	23	5.8%
Continued breast feeding.	Up to 6 months	51	12.8%
	Up to 1year	111	27.8%
	1-2 years	215	53.8%
	>2years	23	5.8%
Burping after feeding	Yes	240	60.0%
	No	160	40.0%
Demonstration of correct position during breast feeding.	Correct position	240	60%
	Incorrect position	160	40%
Demonstration of attachment during breast feeding.	Proper attachment	226	56.5%
	Improper attachment	174	43.5%

Table 4: Association of exclusive breastfeeding and occupation & education among mothers (n=400)

Parameters		Exclusive Breast-feeding		p-value
		Yes N (%)	No N (%)	
Occupation	Housewife/ Unemployed	202 (65.37%)	107 (34.63%)	<0.0001
	Working	35 (38.46%)	56 (61.54%)	
Education	Illiterate	33 (13.92%)	56 (34.35%)	<0.0001
	Middle School	63 (26.58%)	35 (21.47%)	
	High School	70 (29.53%)	16 (9.81%)	
	Higher Secondary School	43 (18.14%)	20 (12.26%)	
	Graduate	17 (7.17%)	24 (14.72%)	
	Post Graduate	11 (4.64%)	12 (7.36%)	

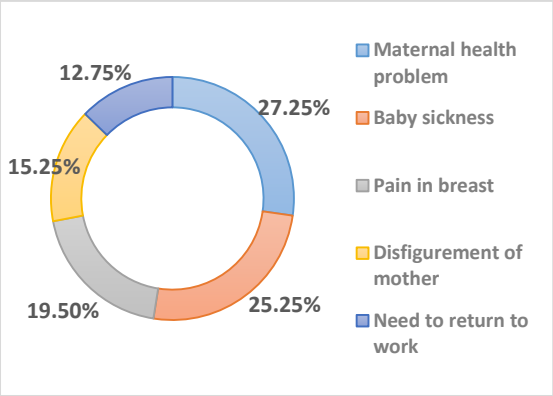
Chi-square test applied; p-value<0.05 significant

Table 5: Association of duration of continued breastfeeding & occupation among mothers (n=400)

Duration of continued breast feeding	Occupation		p-value
	Working N (%)	Housewife N (%)	
Up to 6 months	23 (25.27%)	28 (9.06%)	<0.0001
Up to 1year	30 (32.96%)	81 (26.21%)	
1-2 years	35 (38.46%)	180 (58.25%)	
>2years	3 (3.29%)	20 (38.83%)	
Total	91 (100.0%)	309 (100.0%)	

Chi-square test applied; p-value<0.05 significant

Figure 3: Barriers associated with breast-feeding among mothers (n=400)



DISCUSSION

In present study we included 400 mother-child pair, out of which 91.6% were infants. 53.3% were females and majority (87.5%) of the babies weighed 2.5 kg and above. In a similar study conducted by Biks GA et al. (2018), which included 591 mother-child pairs, two-thirds (66%) of the children were in the age group of 12-24 months. (3)

In our study we found 58.6% mothers were aware about exclusive breast feeding 64.75% mothers were aware about early initiation of breast feeding, 52.50% mothers were aware about initiation of complementary feeding and 75.25% mother were aware about importance of colostrum feeding. A study conducted by Apurba Sinha babu et al during June-July 2008 shows that 57.1 % mother were aware about exclusive breast feeding only 13.6% mother were aware about early initiation of breast feeding, 55.7 % mothers were aware about initiation of complementary feeding and 64.25% mother were aware about importance of colostrum feeding. (4)

Also, we found 73.75 % mother aware about benefits of breast feeding and 54.75% aware that breast feeding prevent child from various infections. And 58.75 % mothers aware about breast feeding during LSCS and illness. Study conducted by Ruowei Li et al (2014) found that 75% mother aware about benefits of breast feeding and 66.6 % aware that breast feeding prevent child from various infections like sinus infection. (5)

In our study we found that 64.75% mothers started breast feeding within one hour after birth, 27.8% mothers continued breast feeding at one year, 52.50 % mother introduce complimentary feed at 6-8 months and 64% of mothers started exclusive breast feeding under 6 months. Similarly, a study carried out by Rakotomanana H et al. in 2017 found that the rates of initiation of breastfeeding within one hour after birth (77.2%), continued breastfeeding at one year (99.6%) and timely introduction of solid, semi-solid or soft foods at 6–8 months (88.3%) were high. Exclusive breastfeeding under 6 months was done by 48.8%.(6) Also, another similar study conducted by Anin SK et al (2020) in Ghana showed that 66.4% of the children (6–23 months) were introduced to complementary feeding in a timely manner, 69.4% met the minimum meal frequency, and 38.9% met the minimum acceptable diet daily.(7)

In our study we found that 75% children fed on colostrum, 45% children received pre lacteal feed and 59.44 % children were fed using bottle. Study conducted by by Roba KT et al.(2016) in two agro-ecological zones of Rural Ethiopia on the Infant and Young Child Feeding (IYCF) practices among mothers of Children aged 6-23 months, found 83.3% fed on colostrum, 22.2% received pre-lacteal feeds, 39.8% of the children were fed using bottle. (8) Another study conducted by Kishore MS et al (2009) found that the pre-lacteals were given to 39 (51%) infants. Pre-lacteal feeding included honey, ghutti, glucose water, plain water, and herbal tea. Eight infants (6%) received at least two pre-lacteals prior to the

first breastfeed. EBF till 4 and 6 months of age was practiced by 17 (30%) and 5 (10%) mothers, respectively. (9)

In our study it was found that 54.8 % mother breast feed to her baby 8-12 times in a day and rest 39.3 % mother breast feed to her baby 12-18 times in a day. Similar study done by Satvik C. Bansal et al (2016) found that 41.3 %mother breast feed to her baby 6-8 times in a day, 36.75 % mother breast fed their baby 8 times or more and 22.2% mother breast fed their baby 6 times or less.(10)

In our study it was found that 74.5% of mother took help from family member during breast feeding. Among them 47.31 % mother took help from mother-in-law during breast feeding. Similar study done by Satvik C. Bansal et al (2016) found that 93.7%mother took help from family member during breast feeding.(10)

Our study shows that majority of the mothers knew that maternal health problem i.e., 27.25% and baby sickness i.e., 25.25% are the most common breast-feeding barrier. Agunbiade OM et al found that the survey showed the major constraints to exclusive breastfeeding to be: the perception that babies continued to be hungry after breastfeeding (29%); maternal health problems (26%); fear of babies becoming addicted to breast milk (26%); pressure from mother-in-law (25%); pains in the breast (25%); and the need to return to work (24%). The qualitative results also demonstrated the dual roles that significant others performed, which had an impact on breastfeeding patterns. The desire to practice exclusive breastfeeding was often compromised shortly after child delivery. Poor feeding, inadequate support from husband and conflicting positions from the significant others were dominant constraints. (11)

CONCLUSION

It was concluded that mothers had generally good knowledge regarding complementary feeding. Several mothers mentioned that giving children appropriate foods for their age is important, both in terms of quantity and consistency. Mothers were supported by their husbands, fathers or mothers-in-law and other members of the family, if present. However, beliefs regarding breast milk and complementary foods were one of the maternal barriers to appropriate feeding. Many mothers started introducing foods to their infants before the age of 6 months because they felt that their breast milk was not enough or the child needed food. Awareness should be created among the beneficiaries about the benefits of IYCF practices so as to increase their enthusiasm for proper participation, by using IEC materials like audio-visuals, posters, demonstrations etc. Demonstrations should be given to all beneficiaries regarding all the steps IYCF Practices. Mothers should be counselled properly for the correct position & attachment by health care providers. Family members should also be counselled and motivated for support IYCF Practices.

RECOMMENDATION

Our findings show significant impact in awareness among the beneficiaries. Highlighting benefits of IYCF practices through intensive awareness, counselling, demonstration by dummy along with supply of tailor-made IEC materials like audio- visuals, posters, demonstrations may result in significant improvement in knowledge and practices. Therefore, it is recommended to implement proper quality processes at beneficiaries level to motivate them for IYCF practices including correct position and attachment to get excellent outcome.

RELEVANCE OF THE STUDY

Despite so many interventions by governments and NGOs to improve breastfeeding rates and IYCF practices, there is hardly any significant improvement morbidity and mortality of under-five children's. Therefore it is essential to know the reasons of low breast feeding rates & IYCF practices at the level among beneficiary's (mothers).

AUTHORS CONTRIBUTION

All authors have contributed equally.

FINANCIAL SUPPORT AND SPONSORSHIP

Nil

Conflict of Interest

There are no conflicts of interest.

Acknowledgement

Professor Dr AK Khatri, Prof Dr Salil Sakalle and Dean Prof Dr Sanjay Dixit for their encouragement.

Declaration of generative AI and AI assisted technologies in the writing process

The authors haven't used any generative AI/AI assisted technologies in the writing process.

References

1. Infant and Young Child Feeding Guidelines, 2016 - Indian pediatrics . Available at: https://indianpediatrics.net/aug2016/703.pdf (Accessed: Apr 24, 2024).
2. Home | Ministry of Health and Family Welfare | Goi (no date). Available at: https://main.mohfw.gov.in/sites/default/files/NFHS-5_Phase-II_0.pdf (Accessed: Apr 24, 2024).
3. Jones AD, Ickes SB, Smith LE, Mbuya MN, Chasekwa B, Heidkamp RA, Menon P, Zongrone AA, Stoltzfus RJ. W orld H ealth O rganization infant and young child feeding indicators and their associations with child anthropometry: a synthesis of recent findings. Maternal & child nutrition. 2014;10(1):1-7.
4. Biks GA Tariku A, Wassie MM, Derso T. Mother's Infant and Young Child Feeding (IYCF) knowledge improved timely initiation of complementary feeding of children aged 6–24 months in the rural population of northwest Ethiopia. BMC research notes. 2018;11(1):1-7.
5. Sinhababu A, Mukhopadhyay DK, Panja TK, Saren AB, Mandal NK, Biswas AB. Infant-and young child-feeding practices in Bankura district, West Bengal, India. Journal of health, population, and nutrition. 2010;28(3):294.
6. Li R, Fein SB, Grummer-Strawn LM. Association of breastfeeding intensity and bottle-emptying behaviors at early infancy with infants' risk for excess weight at late infancy. Pediatrics. 2008;122(Supplement_2):S77-84.
7. Rakotomanana H, Hildebrand D, Gates GE, Thomas DG, Fawbush F, Stoecker BJ. Maternal knowledge, attitudes, and practices of complementary feeding and child undernutrition in the Vakinankaratra Region of Madagascar: a mixed-methods study. Current developments in nutrition. 2020;4(11):nzaa162.
8. Anin SK, Saaka M, Fischer F, Kraemer A. Association between infant and young child feeding (IYCF) indicators and the nutritional status of children (6–23 months) in northern Ghana. Nutrients. 2020;12(9):2565.
9. Roba KT, O'Connor TP, Belachew T, O'Brien NM. Infant and young child feeding (IYCF) practices among mothers of children aged 6–23 months in two agro-ecological zones of rural Ethiopia. Int J Nutr Food Sci. 2016;5(3):185-94.
10. Kishore MS, Kumar P, Aggarwal AK. Breastfeeding knowledge and practices amongst mothers in a rural population of North India: a community-based study. Journal of tropical pediatrics. 2009;55(3):183-8.
11. Patel DV, Bansal SC, Nimbalkar AS, Phatak AG, Nimbalkar SM, Desai RG. Breastfeeding Practices, Demographic Variables, and Their Association with Morbidities in Children. Adv Prev Med. 2015;2015:892825
12. Agunbiade OM, Ogunleye OV. Constraints to exclusive breastfeeding practice among breastfeeding mothers in Southwest Nigeria: implications for scaling up. International breastfeeding journal. 2012;7:1-10.
13. Ali SS, Karim N, Billoo AG, Haider SS. Association of literacy of mothers with malnutrition among children under three years of age in rural area of district Malir, Karachi. children. 2005;55(12):550-3.
14. Kramer MS, Kakuma R. Optimal duration of exclusive breastfeeding. Cochrane database of systematic reviews. 2012(8).
15. Duijts L, Jaddoe VW, Hofman A, Moll HA. Prolonged and exclusive breastfeeding reduces the risk of infectious diseases in infancy. Pediatrics. 2010;126(1):e18-25.