



Awareness, perception and practices regarding infant and young child feeding among health care providers in two districts of Madhya Pradesh: a cross-sectional study

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ABSTRACT

Introduction

Infant and young child nutrition needs to be given top priority in order to prevent and minimize malnutrition given the low rates of child feeding practices. The present study was carried out to assess the awareness, perception and practices of health care providers (HCPs) regarding (IYCF) practices in Madhya Pradesh.

Methodology

The present study was carried out in two districts i.e. Indore and Ujjain in the state of Madhya Pradesh. The study subjects included 108 healthcare providers (54 each from Indore and Ujjain) who had given consent. Interpersonal interview using a pre-designed semi-structured questionnaire was carried out. Data was collected, compiled and analysed using SPSS 22.0 (trial version).

Result

90.7% of the HCPs had complete knowledge about exclusive breastfeeding, importance of colostrum feeding and benefits of breastfeeding. Among the HCPs, all the doctors (100%) and most of the ANMs, ASHAs, MPWs and AWWs were aware of the benefits of breast-feeding. Only 70.4% knew about infections prevented by breast-feeding and the frequency of breast-feeding in a day by the mother. 32.4%, 35.1% and 37% had limited knowledge about the duration of breast-feeding, initiation of complementary feeding and that the mother if unable to sit after LSCS can still feed her child, respectively. 4.6% HCPs were found to think that complementary feed did not play any role in growth and development of baby after 6 months of age. 83.3% counselled mothers regarding exclusive breast-feeding.

Conclusion

Success of IYCF was dependent on the health care provider's knowledge and understanding of important IYCF guidelines. Regular training sessions for health care workers is an important tool for successful implementation of IYCF Practices. Beneficiaries should be motivated for IYCF Practices and also should be counselled properly for the correct position & attachment by health care providers.

Keywords: Breast-feeding, Healthcare providers, practices, IYCF

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Ethical policy and Institutional Review board statement: This study was approved by the Institutional Ethics Committee, Fakhruddin Ali Ahmed Medical College and Hospital, Barpeta, Assam, India (approval no.: FAAMCH/IEC_PG/498/2020/10574).

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INTRODUCTION

The first 1000 days of life, which include 270 days in-utero and first two years of life after birth, have been given utmost importance by WHO/ UNICEF, since it is the most critical period for nutritional interventions. As the maximum brain growth occurs, malnutrition in this crucial period may result in stunting and suboptimal development of the child.^[1] Promoting appropriate early childhood nutrition is the single most effective child survival intervention. The IYCF (Infant and Young Child Feeding) practices of early initiation of breastfeeding within 1-hour, exclusive breastfeeding for the first six month, introducing adequate and appropriate complementary feeding (CF) after completion six months, continued breastfeeding for two years or beyond together with not only substantially reduces malnutrition and morbidity but also reduce under-five deaths by 19% and improve quality of life outcomes in children.^[2]

As per National Family Health Survey-3 data, about 20 million children were unable to receive exclusive breastfeeding (EBF) for the initial six months after birth and about 13 million failed to receive good quality timely and appropriate complementary feeding along with continued breastfeed. Over the past many years, India has failed to achieve any considerable progress in infant feeding practices, with only slight increase in EBF rates among 0-6 months age babies, i.e., from 41.2% in 1998-99 (NFHS-2) to 46.3% in 2005-2006 (NFHS-3). Only 53% babies between 6-8 months age were introduced complementary feeding and only about 44 % of breastfed children were at least the minimum number of times recommended.^[1,2] As per the NFHS-4 data (2015-2016), only 41.6% children <3 years old were breastfed within one hour after delivery. 54.9% children <6 months of age were breastfed exclusively; and only 9.6% of the total children between 6-23 months of age received an adequate diet.^[3]

Infant and young child nutrition needs to be given top priority in order to prevent and minimize malnutrition given the low rates of child feeding practices. National Health Mission has helped to promote IYCF practices, both at the health facility and community levels.

Objectives: 1.To assess the awareness, perception and practices of health care providers (HCPs) regarding (IYCF) practices.

METHODOLOGY

The present Cross-sectional study was carried out in two districts i.e. Indore and Ujjain in the state of Madhya Pradesh, after approval by Institutional Ethics Committee, over a period of 1 year by the Department of Community Medicine, MGM Medical College & MY Hospital, Indore, M.P. The study subjects included healthcare providers who had given consent.

Based on the formula $n = Z^2pq / d^2$; taking expected prevalence (p) as 50%; and margin of error (d) as 10%, the sample size was calculated to be 96. 10% non-response rate was added to it totaling to 105.6. the sample size was then rounded off to 108. Hence, 54 health care providers each from Indore and Ujjain districts were taken. These included ANMs (Auxiliary nurse mid-wives), AWW (Anganwadi Workers), MPW (Multi-purpose workers), Doctors and ASHAs (Accredited Social Health Activists).

Inclusion criteria: Health care providers providing consent to take part in the study.

After taking informed consent from the health care providers, interpersonal interview using a pre-designed semi-structured questionnaire was carried out.

Data collection tool: Questionnaire was designed after thorough review of literature and in consultation with the subject experts. Questionnaire had 2 main sections. Section 1 contained questions related to socio-demographic characteristics of health care providers. Section 2 had questions related to knowledge, attitude and practices regarding Infant and Young Child Feeding practices.

Data analysis

Data was collected, coded appropriately and compiled in MS Excel spread sheet. Continuous data was expressed in mean and standard deviation. The descriptive representation of data was done in the form of frequencies and percentages, calculated in MS Excel.

RESULTS

The socio-demographic characteristics of the health care providers have been depicted in Table 1. 54.6%

of them were aged between 36-45 years; and 61.1% were females. 38% and 35.2% were educated till 10th and 12th respectively. Very few were graduates. (Table 1)

Table 1: Socio-demographic characteristics of health care providers of Indore and Ujjain districts (n=108)

Parameter	Age group	Frequency	Percentage
Age Group	26-30 years	11	10.2%
	31-35 years	23	21.4%
	36-40 years	30	27.8%
	41-45 years	29	26.8%
	46-55 years	15	13.8%
Gender	Male	42	38.9%
	Female	66	61.1%
Education	10 th	41	38.0%
	12 th	38	35.2%
	Graduate	18	16.6%
	Post graduate	11	10.2%
Designation	ANM	16	14.8%
	AWW	32	29.6%
	MPW	16	14.8%
	Doctor	12	11.2%
	ASHA	32	29.6%
District	Indore	54	50%
	Ujjain	54	50%
	Total	108	100%

The knowledge of HCPs was assessed and has been depicted in Table 2. Most of those interviewed were Anganwadi workers and ASHAs (29.6% each). 90.7% of the HCPs had complete knowledge about exclusive

breastfeeding, importance of colostrum feeding and benefits of breastfeeding, while the rest were partially aware. (Table 2)

Table 2: Assessment of Knowledge among health care providers (n=108) of Indore and Ujjain districts regarding IYCF

Awareness regarding	Partial knowledge N (%)	Complete knowledge N (%)
Exclusive breastfeeding	10 (9.2%)	98 (90.7%)
Early initiation of breast feeding	28 (26.0%)	80 (74.0%)
Importance of colostrum feeding	10 (9.2%)	98 (90.7%)
Benefits of breast feeding	10 (9.2%)	98 (90.7%)
Infection prevented by breastfeeding	32 (29.6%)	76 (70.4%)
Duration of breast feeding	35 (32.4%)	73 (67.6%)
Frequency of breast feeding in a day by mother	32 (29.6%)	76 (70.4%)
Initiation of complementary feeding	38 (35.1%)	70 (64.8%)
Breast feeding by LSCS mother with other illness	40 (37.0%)	68 (62.9%)
Proper attachment	16 (14.8%)	94 (85.2%)

Perception of HCPs was assessed as depicted in Table 3, and it was noted that 90.7% strongly agreed that breast-feeding was useful for the growth and development of babies; mothers were comfortable during the process and it helped increase the confidence of mothers in handling the baby. 87% strongly agreed to the fact that breast-feeding

increased bonding between the mother and the baby. Only 6.5% felt that mothers did feel anxious and stressed while breast-feeding. 4.6% HCPs were also found to think that complementary feed did not play any role in growth and development of baby after 6 months of age. (Table 3)

Table 3: Assessment of Attitude among health care providers (n=108) of Indore and Ujjain districts regarding IYCF

Perception		Response				
		Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
Breast feeding is useful for babies' growth & development	Frequency	98	10	0	0	0
	Percentage	90.7%	9.3%	0.0%	0.0%	0.0%
Mothers feel anxious or stressed while breastfeeding	Frequency	6	1	0	13	8
	Percentage	5.6%	0.9%	0.0%	12.0%	8.5%

Confidence level in mothers when handling infant after breastfeeding	Frequency	98	10	0	0	0
	Percentage	90.7%	9.3%	0.0%	0.0%	0.0%
Breast feeding increases bonding between mother and baby	Frequency	94	10	0	40	0
	Percentage	87.0%	9.3%	0.0%	3.7%	0.0%
Feeling of comfort during breast feeding in mothers	Frequency	98	10	0	0	0
	Percentage	90.7%	9.3%	0.0%	0.0%	0.0%
Mothers recommend breast feeding to peer group	Frequency	90	10	0	8	0
	Percentage	83.3%	9.2%	0%	7.4%	0.0%
Complementary feed is necessary for proper growth & development after the age of 6 months	Frequency	92	8	3	5	0
	Percentage	85.1%	7.4%	2.7%	4.6%	0.0%

Table 4 depicts the practices of the HCPs wherein, 83.3% counselled mothers regarding exclusive breast-feeding. 96.2%, 94.4% and 92.5% counselled mothers about its benefits, colostrum feeding and complementary

feeding respectively. 90.7% used to demonstrate the correct position of baby during breast-feeding. (Table 4)



Table 4: Assessment of Practices among health care providers (n=108) of Indore and Ujjain districts regarding IYCF

Practice	Yes	No
Counsel mother about the benefits of Breast feeding	104 (96.2%)	4 (3.7%)
Counsel mother about the exclusive Breast feeding	90 (83.3%)	18 (16.7%)
Counsel mother about the feeding of first milk	102 (94.4%)	6 (5.6%)
Counsel mother about the complimentary feeding	100 (92.5%)	8 (7.5%)
Demonstrate of correct position of the baby during Breast feeding	98 (90.7%)	10 (9.3%)

DISCUSSION

The present study included a total of 108 healthcare providers, with majority aged between 36-45 years old. The average age was 40 years, with the oldest being 55-year-old. Most of them were educated till high school (38%). Similar findings were observed in a study conducted by **Syifa F. Syihab et al (2021)** among 67 health care providers where the average age was 43.18 years with the oldest being 63 years old. Most of them had graduated from high school (47.8%).^[4]

In the present study we found 90.7 % health care providers were aware about exclusive breast feeding, 90.7% about early initiation of breast-feeding, 64.8% about initiation of complementary feeding and 70.4 % health care provider were aware about importance of colostrum feeding. 85.2 % knew about proper attachment of baby to the breast. Also, we observed that 90.7 % health care providers were aware about benefits of breast feeding and that it prevents children from various infections. Only 62.9 % knew about breast feeding during LSCS and illness. Similar study done by **Yasmeen Memon et al (2018)** found that 93 % health care providers were aware about exclusive breast feeding, 98% about early initiation of breast feeding, 66% about initiation of complementary feeding and 70.4 % about importance of colostrum feeding. 78% knew about good attachment of baby to breast.^[5]

In the present study, on asking if breast feeding is useful for babies' growth & development, majority agreed. A large proportion also agreed with the fact that breast-feeding helped to increase bonding between the mother and the baby. Only 6.5% felt that mothers did feel anxious and stressed while breast-feeding and 4.6% HCPs were also found to think that

complementary feed did not play any role in growth and development of baby after 6 months of age.

As per the present study, 83.3% HCPs counselled mothers regarding exclusive breast-feeding. 96.2%, 94.4% and 92.5% counselled mothers about its benefits, colostrum feeding and complementary feeding respectively. 90.7% used to demonstrate the correct position of baby during breast-feeding. In a study by **Syifa F. Syihab, Ayu Mutiara Santanu et al (2021)**, health worker compliance was found to be associated with client health attitudes. Inappropriate knowledge and failure to advice mothers based on their needs led to ineffective communication and practice from the side of IYCF care-givers. Hence, they stated that in order to assist the improvement of children's nutritional status, it is crucial to consider the education, knowledge, and attitude of health care providers in IYCF counselling practice.^[4] In another study by **Anuraag Chaturvedi, N Nakkeeran et al (2014)** it was found that during the counselling session, about 35% of AWWs advised mothers on exclusive breastfeeding and about 39% counselled mothers on frequency and duration of breastfeeding. Few AWWs advised about feeding practices during a child's illness and the need for regular growth monitoring. About 19% of AWWs provided advice on frequency of feeding, 10% on size of the portions and 7% on consistency of food to be given. None of the AWWs promoted diet diversity in their discussion with caregivers. It was reported that approximately 26% AWWs encouraged the caregivers to feed their child.^[6]

Most of the HCPs in the present study stated that maternal health problems were the most common barriers in breast-feeding, along with pain in breast, fear of distortion of breast after breast feeding, child



sickness and the need to return to work. **Agunbiade OM et al** found that the major constraints to exclusive breastfeeding were maternal health problems (27.2%); fear of babies becoming addicted to breast milk (26%); pains in the breast (25%); and baby sickness (24%).^[7]

The global weighted prevalence for 57 LMICs (2010–2018) is around 51.9% for early initiation of breastfeeding, 45.7% for exclusive breastfeeding till 6 months and 83.1% for continued breastfeeding at 1 year.^[8] A study in Ethiopia found that 17% and 72.2% of children aged 6–23 months consumed diets that met the criteria for MDD and MMF, respectively^[9]. A study on diet quality of infants aged 6–23 months in 42 LMICs has revealed that wealthier households introduce more diverse foods at earlier ages.^[10] Furthermore, a recent study reported that only 21.3%, 56.2% and 10.1% of the 80 LMICs with data on IYCF had prevalence levels above 50% for MDD, MMF and MAD among children aged 6–23 months, respectively.^[11] A systematic review on interventions in LMICs has revealed that breastfeeding education interventions can improve the rates of early initiation of

breastfeeding by 20%, exclusive breastfeeding (EBF) at 3 months by 102% and EBF at 6 months by 53%. Additionally, when these interventions are led by healthcare professionals, they are more effective.^[12,13] Other interventions that can help promote breastfeeding amongst working women include having crèches at the workplace and flexible working hours and creating public awareness of the dangers of bottle and formula feeding.^[14]

CONCLUSION

The present study found that the success of IYCF was dependent on the health care provider's knowledge and understanding of important IYCF guidelines. Regular training sessions for health care workers is an important tool for successful implementation of IYCF Practices. Emphasis should be given for training and refresher training all the grass root level health workers so as to successfully implement of IYCF Practices. Beneficiaries should be motivated for IYCF Practices and also should be counselled properly for the correct position & attachment by health care providers.



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