

## Original Research Article

# An evaluation: IYCF practices in rural area of Bareilly district, Uttar Pradesh

Medhavi Agarwal, H. S. Joshi, Ruchi Tanwar\*, Arun Singh, Rashmi Katyal, Deepak Upadhyay

Department of Community Medicine, Rohilkhand Medical College and Hospital, Bareilly, Uttar Pradesh, India

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### \*Correspondence:

Dr. Ruchi Tanwar,

E-mail: [ruchitanwar888@gmail.com](mailto:ruchitanwar888@gmail.com)

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## ABSTRACT

**Background:** In recent Annual Health Survey conducted in India from 2010 to 2013 covering all the 284 districts (as per 2011 census) of 8 Empowered Action Group (EAG) States (Bihar, Uttar Pradesh, Uttarakhand, Jharkhand, Madhya Pradesh, Chhattisgarh, Odisha and Rajasthan) and Assam, only 21% of breastfeeding and non-breastfeeding children are fed in accordance with the infant and young child feeding (IYCF) recommendations thus this study was taken up to evaluate the infant and young child feeding (IYCF) recommendations practices in Bareilly district of U.P. Objective is to evaluate the infant and young child feeding (IYCF) practices in rural area of Bareilly district, U.P.

**Methods:** Community based Cross sectional study was conducted using 30 by 7 cluster sampling technique in rural area of Bareilly district, Uttar Pradesh from August 2017 to September 2017 in all children of age  $\leq 1$  year residing in the study area. Sample size was 210. The results were compiled and analyzed in Epi info-7.2.

**Results:** In this study 69.5% children were put to breast feeding with in 1 hour of birth. Prolactal feed was given to 20.5% of studied population.

**Conclusions:** There have been considered developments in the status of IYCF practices in Bareilly as compared to National Family Health Survey-3 at national level yet the scope for further progress is substantial.

**Keywords:** Infant and young child feeding, Rural area, Evaluation

## INTRODUCTION

The nutritional well being of the population especially of the under 5 children is both the outcome and an indicator of national well being. Child is the chief victim of interplay of nutrition and the socioeconomic factors. The under-five population of India stands at a staggering 112.8 million.<sup>1</sup> However, despite all the advances in health, education and agriculture sectors as well as vast improvements in the country's economy, India figures in the list of countries those have made insufficient progress towards meeting the Millennium Development Goals.<sup>2</sup> It has the largest numbers of under-five children who are moderately or severely stunted, accounting for 38% of

the global burden. India also has the highest numbers of children with moderate and severe wasting.

In a recent Annual Health Survey conducted in India from 2010 to 2013 covering all the 284 districts (as per 2011 census) of 8 Empowered Action Group (EAG) States (Bihar, Uttar Pradesh, Uttarakhand, Jharkhand, Madhya Pradesh, Chhattisgarh, Odisha and Rajasthan) and Assam.<sup>3</sup> Only 21% of breastfeeding and non-breastfeeding children are fed in accordance with the infant and young child feeding (IYCF) recommendations thus this study was taken up to evaluate the infant and young child feeding (IYCF) recommendations practices in the bareilly district of Uttar Pradesh.

The World Health Organisation defines optimal IYCF practice as the initiation of breastfeeding within one hour of birth, breastfeeding exclusively for the first six months, continuing to breastfeeding for two years, on demand breastfeeding, giving on colostrum, no prelacteal feed, no bottle feeding and initiation of solid and semi solid food at six months, minimum dietary diversity, minimum meal frequency, minimum acceptable diet, consumption of iron rich or iron fortified food, age appropriate breast feeding, predominant breastfeeding under six months and milk feeding frequency for non-breastfeed children.<sup>4</sup>

## METHODS

The community based cross sectional study was conducted in rural area of Bareilly district, Uttar Pradesh from August 2017 to September 2017 in all children of age  $\leq 1$  year residing in the study area. Study universe has population of 4,465,344 residing in 2437 villages and wards of 6 sub-districts. The majority of the residents females were house wives. 30 clusters has been chosen from the population by applying two stage 30\*7 cluster probability proportional to size (PPS) sampling technique. From these clusters, houses were taken out by simple random sample technique and from which randomly one child of age  $\leq 1$  year was selected. A total of 7 individuals were selected from each cluster by simple random sampling method using random table to achieve the sample size. If more than one child present in one house, then one child is chosen by lottery method. Data was collected by using pre-tested semi-structured questionnaire. An interview with mothers of index child was conducted at their home ensuring privacy. We include all Children of age  $\leq 1$  year who is resident of the study area and exclude all Children aged  $> 1$  years and

mother not give consent to participate at the time of data collection. Ethical clearance was given from ethical committee letter no.IEC/10/2017. There is no conflict of interest present. Consent was taken from participants. Privacy and confidentiality was maintained throughout the study period by excluding personal identifiers during data collection. Data was compiled and analyzed using SPSS statistics Ver. 22.0.

## RESULTS

Out of the total 210 children, a majority, that is 197 (93.8%) mothers reported having put their children to the breast (ever breastfeed). Early initiation of breastfeeding and exclusive breastfeeding of children below six months are considered the most decisive indicators for assessing breastfeeding practices in infants.<sup>5</sup> 137 (69.5%) of infants were those, in whom breastfeeding was initiated within one hour after birth among ever breastfeed children. 87.5% (49 out of 56) children were exclusively breastfeed up to four months. The rate of exclusively breastfeed increased from the age of four to six month, that is 92.7% i.e., 38 out of 41. Total of 89.7% of children were on exclusive breastfeeding from birth to six month of age. WHO recommends that after six months, infants be given complementary foods in addition to breast milk.<sup>6</sup> 20.9% of the infants of aged 0-3 months were given semi-solid food but there is sharp rise in the percentage (i.e., 87.8%) of infants from 4-6 months of age group who were given semi-solid food, due to the older belief that complimentary feeding should be started by 4 months and 97.2% were given after 6 months. Bottle feeding was observed in 75.2% (148) of all the children studied among ever breast feeds. In our study Out of 210 children, 43 (20.5%) were given prelacteal feed which was seen much lower as compared with NFHS-3 data at the national level.<sup>7</sup>

**Table 1: Evaluation of IYCF practices in rural area of Bareilly district.**

	Indicators	Denominator	Frequency	Percentage (%)
<b>Indicator 1</b>	Ever breastfed (0-12 months)			
	Yes	210	197	93.8
	No		13	6.2
<b>Indicator 2</b>	Started breastfeeding within 1 hour (0-12 months)			
	Yes	197	137	69.5
	No		60	30.5
<b>Indicator 3</b>	Exclusively breastfed in last 24 hours in 0-4 month babies			
	Yes	56	49	87.5
	No		07	12.5
<b>Indicator 4</b>	Exclusively breastfed in last 24 hours in 4-6 month babies			
	Yes	41	38	92.7
	No		03	7.3
<b>Indicator 5</b>	Exclusively breastfed in last 24 hours in 0-6 month babies			
	Yes	97	87	89.7
	No		10	10.3

	Indicators	Denominator	Frequency	Percentage (%)
Indicator 6	Exclusively breastfed in last 24 hours in 6-12 month babies			
	Yes	113	3	2.7
	No		110	97.3
Indicator 7	Any breast fed baby fed any food or drink or bottle fed (0-12 months)			
	Yes	197	148	75.2
	No		49	24.8
Indicator 8	Children age 0-3 months receiving only water while continuing to breast fed			
	Yes	43	07	31.1
	No		36	68.9
Indicator 9	Children age 0-3 months receiving complementary food while continuing to breast fed			
	Yes	43	09	20.9
	No		34	79.1
Indicator 10	Children age 4-6 months receiving only water while continuing to breast fed			
	Yes	41	32	78.0
	No		9	22.0
Indicator 11	Children age 4-6 months receiving complementary food while continuing to breast fed			
	Yes	41	36	87.8
	No		5	12.2
Indicator 12	Children age 0-6 months receiving complementary food while continuing to breast fed			
	Yes	97	45	46.2
	No		52	53.8
Indicator 13	Children age 7-9 months receiving only water while continuing to breast fed			
	Yes	72	71	98.6
	No		01	01.4
Indicator 15	Children age 7-9 months receiving complementary food while continuing to breast fed			
	Yes	72	70	97.2
	No		02	2.8
Optional indicator				
	Prelacteal feed given			
	Yes	210	43	20.5
	No		167	79.5

## DISCUSSION

As a global public health recommendation, infants should be fed breast milk only for the first six months, because breast milk is hygienic compared with other fluids and contains all the nutrients and antibodies that are very important to prevent disease months.<sup>4</sup> As discussed earlier out of the total 210 children, a majority, that is 197 (93.8%) mothers reported having put their children to the breast (ever breastfeed), which is much higher than National Family Health Survey-3 (NFHS-3) data at national level and at Delhi showed it as 23.4% and 21.7%, respectively.<sup>7,8</sup> Study from west Bengal had shown it much lower as 13% only.<sup>9</sup> An epidemiological

evidence of casual association in between early association of breastfeeding and reduced infection specific neonatal mortality has also been documented.<sup>10</sup>

Bottle feeding was observed in 148 (75.2%) among 197 of 0-12 months of children studied which is not a WHO recommendation. Other studies from India have reported a much lesser prevalence of bottle feeding as compared with our study.<sup>7-9</sup>

In our study Out of 210 children, 43 (20.5%) were given prelacteal feed which was seen much lower as compared with NFHS-3 data at the national level (57.2%), Delhi States (45.7%), and from West Bengal (26.7%).<sup>7-9</sup>

Exclusive breast feeding was done by 87 (89.7%) under 6 months of age in last 24 hours. This was much better than the figures reported by NHFS-3 at the national level (46.4%), from Delhi (34.5%) and study from the west Bengal (57.1%).<sup>7-9</sup> Only 20% of the children below 6 months were exclusively breast feed, according to a study from slum of Delhi.<sup>11</sup> The proportion of Children who received complementary feeding at 0-6 months of age was found to be 45 (46.2%) among 97, a wide variation from the study of Kolkata that is 71.7% while comparable in Allahabad (38.7%).<sup>12,13</sup>

In this community based cross-sectional study 69.5% of mothers initiated breastfeeding within first hour after delivery. This finding is lower than previous study findings in Banda, Barabanki and equal in Chitrakoot, Hamirpur while higher than other parts of Uttar Pradesh.<sup>14</sup> This discrepancy might be due to the time between previous studied and this study, the number of mothers who give birth at a health institution is dramatically increasing due to persistent promotion of free delivery service provision in the country, which creates a good opportunity for health professionals to promote the initiation of breastfeeding within an hour after birth.

About 89.7% of mothers who have children aged less than 6 months exclusively breast feed their index infant in the last 24 hour. In our study, the age of the infants in the mother-infant pair was 0-12 months. There might be recall bias since mothers were interviewed to recall their experience.

## CONCLUSION

There have been considerable developments in the status of IYCF practices in Bareilly as compared to National Family Health Survey-3 at national level yet the scope for further progress is substantial. Exclusive Breast Feeding was not fully practiced in the study area. Therefore promotion of IYCF is needed in the area to strengthen EBF practices.

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