

## PERSPECTIVE

## Trend in Infant and Young Child Feeding practices during 2005 – 2015 in India

Umesh Kapil<sup>1</sup>, Aakriti Gupta<sup>2</sup><sup>1</sup>Professor, Public Health Nutrition; <sup>2</sup>Research Scientist, Department of Human Nutrition, All India Institute of Medical Sciences, Ansari Nagar, New Delhi - 110 029, India

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## Corresponding Author

Address for Correspondence: Dr Umesh Kapil, Professor, Public Health Nutrition, Department of Human Nutrition, All India Institute of Medical Sciences, Ansari Nagar, New Delhi - 110 029, India  
E Mail ID: [umeshkapil@gmail.com](mailto:umeshkapil@gmail.com)

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## Abstract

**Background:** Optimal infant and young child feeding (IYCF) practices during first 2 years of life is the key to ensuring optimal growth and development of the infant. Improving IYCF practices have an important role in reducing morbidity and mortality amongst under 5 children in India. **Material & Methods:** The secondary data from National Family Health Survey (NFHS)-3 and NFHS- 4 was analyzed. **Objective:** To assess the trend in IYCF practices during 2005 – 2015 for 13 selected states of India. **Results:** It was found that over a decade, there has been an improvement in early initiation of breast feeding and exclusive breastfeeding for 6 months amongst infant in 11 out of 13 states. However, a reduction in the timely initiation of complementary feeding amongst children in the age group of 6-8 months has been observed in 9 out of 13 states. **Conclusion:** There is a need to strengthen the efforts to further improve the IYCF practices in India for reducing high rates of undernutrition in the country.

## Keywords

Infant and Young Child, NFHS, Complementary Feeding, Breast Feeding, Under 5 Children

## Introduction

Adequate nutrition through optimal infant and young child feeding during first 2 years of life is fundamental for development of the child to its fullest potential. (1) World Health Organization formulated Infant and Young Child Feeding (IYCF) practices key indicators for monitoring and guiding the feeding practices of young children. These were initiation of breast feeding within 1 hour of birth, exclusive breast feeding for first 6 months of life and continued breast feeding for 2 years or more together with age-appropriate and nutritionally adequate complementary feeding initiated after 6 months of age. (2)

Improving IYCF practices have an important role in reducing morbidity and mortality amongst under 5 children. (3) Breast milk provides the ideal nutrition

for infants, and is also a key source of nutrients during infection. Early initiation and exclusive breastfeeding for 6 months reduces one third of respiratory infections and about half of all diarrhea episodes in low- and middle-income countries. Optimal breastfeeding practices in India may reduce around 156,000 child deaths due to diarrhea and pneumonia. (4,5,6) Timely introduction of complementary foods has also been associated with better nutritional outcomes in children. (7)

Earlier surveys have shown that IYCF practices have remained sub optimal in India (NFHS-1, NFHS-2). (8,9) Assessment of progress in IYCF practices provides data for necessary corrective actions by the health planners and administrators.

## Aims & Objective

To assess the trend in IYCF practices during 2005 – 2015 for 13 selected states of India.

## Material & Methods

The National Family Health Survey (NFHS), Indian version of the Demographic and Health Surveys (DHS) is a large-scale, multi-round survey conducted in a representative sample of households throughout India. Three more rounds of the survey have been conducted since the first survey in 1992-93. The survey provides state and national information for India on fertility, IYCF practices, practice of family planning, maternal and child health, reproductive health, nutrition, anaemia, utilization and quality of health and family planning services using the DHS standard model questionnaires.

The datasets of NFHS-3 (2005-2006) (10) and NFHS-4 (2015-2016) (11) was analyzed to assess the trend of IYCF practices in 13 selected states of India namely Bihar (B), Goa (G), Haryana (H), Karnataka (KK), Madhya Pradesh (MP), Maharashtra (MH), Manipur (M), Meghalaya (Me), Sikkim (S), Tamil Nadu (TN), Tripura (TR), Uttrakhand (UK) and West Bengal (WB).

## Results

It was observed that there has been improvement over a decade in early initiation of breastfeeding amongst children under 3 years of age in 11 out of 13 states (B, G, H, KK, MP, MH, M, Me, S, TR and WB) except TN and UK. Highest improvement was seen in B (30.9%), WB (23.8%) and S (23.2%) ([Table 1](#)). The early initiation of breastfeeding amongst children under 3 years of age was practiced by mothers in the range of 28-73% across states (NFHS-4).

Improvement was also seen in the percentage of exclusively breastfed infants under 6 months of age over a decade in 11 out of 13 states (B, G, H, MP, MH, M, Me, S, TN, TR and UK), except KK and WB. Highest increase was seen in G (43.2%), MP (36.6%) and TR (34.6%) ([Table 1](#)). Exclusive breast feeding for 6 months amongst infants was practiced by mothers in the range of 36-74% across the states (NFHS-4).

It was further observed that timely initiation of complementary feeding for children in the age group of 6-8 months receiving semi-solid or solid food along with breast milk reduced in 9 out of 13 states (B, H, KK, MP, MH, Me, S, TN and UK) over a decade ([Table 1](#)). There was a decline in the IYCF practices. Timely initiation of complementary feeding was

practiced for 14-79% children between 6-8 months across the states (NFHS-4).

## Discussion

Earlier NFHS surveys showed that there was an increase in early initiation of breastfeeding within 1 hour from 9.5% in NFHS-1 (1992 -93) to 15.8% in NFHS-2 (1998 -1999) and 25% in NFHS-3 (2005-2006). There was an improvement in the timely introduction of complementary feeding in children (6-9 months) from 31 % to 33 % between NFHS-1 and NFHS-2 and 55% in NFHS-3 for children between 6-8 months of age. (8,9,10)

In the datasets of NFHS-4 (2015-2016) released recently, we found that IYCF practices have shown an improvement in the rates of early initiation of breast feeding and exclusive breastfeeding amongst infants in most (11 out of 13) states from the year 2005 to 2015 (NFHS-3, NFHS-4). However, there was a reduction in the timely initiation of complementary feeding for children aged 6-8 months. In addition, the rate of IYCF practices continues to remain suboptimal across the states.

Delayed initiation of breast-feeding, deprivation from colostrum, non-exclusive breastfeeding has been associated with poorer growth outcomes. In resource poor settings, breast milk is often displaced, or replaced, by less nutritious foods and often also expose infants to diarrheal infections leading to severe nutrient depletion. Breastfeeding may contribute significantly to intake of key nutrients that are lacking in such low-quality complementary diets. (12,13) Moreover, late introduction of complementary feeding may make the diet of the child deficient in various nutrients especially energy. Delayed complementary feeding has been associated as an important etiological factor of stunting in children. (7)

## Conclusion & Recommendation

Improving IYCF practices is the key to ensuring a child's healthy growth and development and can positively impact nutritional outcomes of children. High prevalence of undernutrition in India warrants immediate attention to further increase the rates of early initiation of breast milk, exclusive breast feeding and timely initiation of complementary feeding. There is a need for strengthening the training and participation of peripheral health and nutrition functionaries such as village level Anganwadi workers, Auxiliary Nurse Midwives, Accredited Social Health Activists and community

volunteers in educating mothers regarding the optimal IYCF practices.

### Authors Contribution

Both authors had made substantial contributions to conception, design, data collection, analysis and interpretation of data; drafting the article, revising it critically for important intellectual content; and final approval of the version to be published.

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### Tables

**TABLE 1 TREND IN IYCF PRACTICES DURING NFHS-3 AND NFHS-4**

State	NFHS Data	Children under 3 years of age who are breastfed within one hour of birth (%)	Children under 6 months of age who are exclusively breastfed (%)	Children aged 6-8 months receiving solid or semi-solid food and breastmilk (%)
Bihar	NFHS III (2005-06)	4	28	54.5
	NFHS IV (2015-16)	34.9	53.5	30.7
	Percentage change	30.9	25.5	-23.8
Goa	NFHS III (2005-06)	59.7	17.7	66.8
	NFHS IV (2015-16)	73.3	60.9	NA
	Percentage change	13.6	43.2	NA
Haryana	NFHS III (2005-06)	22.3	16.9	42.6
	NFHS IV (2015-16)	42.4	50.3	35.9
	Percentage change	20.1	33.4	-6.7
Karnataka	NFHS III (2005-06)	35.6	58.6	69.7
	NFHS IV (2015-16)	56.4	54.2	46
	Percentage change	20.8	-4.4	-23.7
Madhya Pradesh	NFHS III (2005-06)	14.9	21.6	46
	NFHS IV (2015-16)	34.5	58.2	38.1
	Percentage change	19.6	36.6	-7.9
Maharashtra	NFHS III (2005-06)	51.8	53	45.5

	NFHS IV (2015-16)	57.5	56.6	43.3
	Percentage change	5.7	3.6	-2.2
<b>Manipur</b>	NFHS III (2005-06)	57.2	62.1	77.4
	NFHS IV (2015-16)	65.4	73.6	78.8
	Percentage change	8.2	11.5	1.4
<b>Meghalaya</b>	NFHS III (2005-06)	58.6	26.3	77.5
	NFHS IV (2015-16)	60.6	35.8	67.4
	Percentage change	2	9.5	-10.1
<b>Sikkim</b>	NFHS III (2005-06)	43.3	37.2	85.4
	NFHS IV (2015-16)	66.5	54.6	61.8
	Percentage change	23.2	17.4	-23.6
<b>Tamil Nadu</b>	NFHS III (2005-06)	55.2	34.1	81.2
	NFHS IV (2015-16)	54.7	48.3	67.5
	Percentage change	-0.5	14.2	-13.7
<b>Tripura</b>	NFHS III (2005-06)	33.1	36.1	NA
	NFHS IV (2015-16)	44.4	70.7	13.6
	Percentage change	11.3	34.6	NA
<b>Uttarakhand</b>	NFHS III (2005-06)	32.9	31.2	47.8
	NFHS IV (2015-16)	27.8	51	46.7
	Percentage change	-5.1	19.8	-1.1
<b>West Bengal</b>	NFHS III (2005-06)	23.7	58.6	47.1
	NFHS IV (2015-16)	47.5	52.3	52
	Percentage change	23.8	-6.3	4.9
<i>NA- Data was not available</i>				