



Feeding Practices in the First 1000 Days of Life

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Abstract

Present trend to concentrate on nutrition during first 1000 days of life prompted to present the infant feeding practices that existed in 2007 and a decade after in 2017. 503 mothers were randomly selected from scheduled castes, scheduled tribes and other castes from 45 villages in Telangana State. Literate mothers were 45.5 percent in 2007 and 42 in 2017. Most of them are farm laborers and few were multiparous. Nuclear families were 47.3 percent in 2007 while in 2017 they increased to 88 percent. Major shift in practices from 2007 to 2017 are seen in the areas of registration of pregnant women in ICDS centers which increased from 47.3% to 92.0%, feeding breast milk within one hour of delivery went up from 62.8 to 100%, Mean birth weight from 2.1 kg to 3 kg. Most mothers acquired knowledge of good nutritional practices by 2007 itself as they were part of the supplementary feeding and nutrition programs since 1970's, therefore the shift to these better practices between 2007 and 2017 was marginal. Mothers felt the need for better nutrition in both groups.

Keywords: Infant Feeding Practices; Colostrum; Multiparous; Nuclear Families; Joint Families

Introduction

Nutrition for the neonate starts from the womb of mother, pregnancy is considered a seed to establish good health. Exclusive breast feeding to the neonate is nourishing, ensures growth and is considered necessary to prevent deaths due to diarrhea and pneumonia. Importance of nutrition during pregnancy and breast feeding after the child is born is stressed in all ICDS and childhood centers Arjun Singh in 2004 said "The traditional Indian Practice of exclusive breast feeding for six months, introduction of complementary foods around 6 months through annaprasna ceremony and continued breast feeding up to two years or more was practiced. It was reported that 55th World Health Assembly adopted a Global Strategy for infant and young child feeding confining to the traditional Indian practice [1]. Prior to 70's children were breast fed exclusively up to 3 years which led to severe nutritional deficiencies among toddlers. Intensive drive was launched to educate the mothers for the right nutrition during pregnancy, ideal breast feeding practices and weaning at the correct age ICDS centers [2]. The trend for breast feeding has shown an upward trend over the years in India [3]. Under the National Health Mission of Health and Family Welfare, Government of India, improving breast feeding

practices or quality survival is initiated as an important intervention. Under this banner MAA (Mother Absolute Affection) program was launched in August 2016 for one year [4]. Presently the stress is on infant feeding in the first 1000 days [4]. Several studies on infant feeding practices are done throughout India. The present study is done in the southern part of India – Telangana to document the feeding practices during pregnancy and infancy (breast feeding and weaning) which existed in 2007 and 2017 in the rural and tribal villages of Telangana.

Methods and Materials

Feeding practices during pregnancy till the child is 2 years (first 1000 days of life) were collected in 2007 [5] and in 2017. Multi stage random sampling procedure was followed for selection of sample. At the first stage all 9 districts of erstwhile Telangana were selected. At the second stage 5 ICDS centers from each district were randomly selected comprising of 45 centers. At the third stage 10 to 12 registered mothers from each center having a child of 2 years were randomly selected. A total of 503 mothers formed the sample in 2007. A follow-up study was done in the same rural centers of Telangana in 2017. 150 mothers having a child below 2

years were randomly selected from the same ICDS centers. Practices followed during pregnancy and infant feeding practices up to 2 years were collected. A structured, pretested, predesigned schedule was used to collect information in 2007 and 2017. Height and Weight of mothers and birth weight of babies was measured using standard scales.

Results

Demographic profile, practices during pregnancy and infant feeding practices up to 2 years among mothers is presented.

Demographic profile of Mothers

Mothers selected belong to scheduled castes, scheduled tribes, backward castes and other communities in 2007 and 2017 (Table 1).

S. No	Particulars	2007	2017
I	Community	% (No)	% (No)
	Scheduled Castes	25.7 (134)	90.0 (135)
	Scheduled Tribes	2.8(14)	0
	Backward Classes	62.5 (314)	0
	Other Castes	8.2 (41)	60.0 (10)
II	Education		
	Illiterate	54.5 (274)	58.0 (87)
	Literate	45.5 (229)	42.0 (63)
III	Type of family		
	Nuclear Family	47.3 (238)	88.0 (132)
	Joint Family	52.7 (265)	12.0 (18)

Table 1: Demographic Profile of Mother.

Literate mothers are 45.5 and 42 percent in 2007 and 2017 respectively, some of them studied up to 10th class. Nuclear families were 47.3 percent in 2007 and 88 percent in 2017; Increase may be due to initiation of welfare programs family wise. Impact of splitting of joint families into nuclear ones may have an influence on child rearing practices. Child marriages did exist in 2007 around 30.2% got married by 15 years and 38% between 16-20. In 2017 all the mothers were married between 15- 20 years. It was observed that those who had balwadi education and schooling formed the sample which might have had an influence on Infant-feeding practices.

Practices during Pregnancy

Pregnant mothers, registered at ICDS center around 3rd month are 47.3 percent in 2007, and 92 percent in 2017. Regular visits to center are by 57.3 percent in 2007 and 90 percent in 2017 (Table 2). Iron and folic acid tablets are consumed by 75.5 percent of beneficiaries regularly while remaining 24.5% consumed fewer and that too irregularly. Similar percentage is seen in the 2017 group. They expressed that medicines given by the hospital were not good, so they consulted private doctor and consumed those vitamin tablets. Hospital deliveries were 83.1 percent in 2007 and in 2017 the entire group went for hospital deliveries which was a good shift.

S. No	Particulars	2007	2017
I	Mothers Registered	% (No)	% (No)
	3 months	47.3 (238)	92.0 (138)
	4 - 6 months	39.4 (198)	5.3 (8)
	> 7 months	13.3 (67)	2.7 (4)
II	Visit to Hospital		
	Monthly	57.3 (292)	90.0 (135)
	When Required	42.7 (211)	10.0 (15)
III	Place of Delivery		
	Home	16.9 (85)	0
	Hospital	83.1 (418)	100 (150)

Table 2: Particulars of Pregnant Mothers.

Infant Feeding Practices

(Table 3) Initiation of breast of milk within 3 hours of delivery is 88.8 percent 2007 group and 97.3% in 2017 group most of them introduced within 1 hour after delivery. The importance of feeding colostrum was felt by majority of mothers which is as high as 93.9% in 2007 and 94.7% in 2017.

All mothers reported feeding colostrum to the neonate. First food given apart from breast milk is cow's milk, glucose water, honey or plain water by 53 and 38.7 percent in 2007 and 2017 respectively. Majority beneficiaries had a clear concept of weaning by 6 months (74.3%).

Body Mass Index of mothers is 19.5 in 2007 while in 2017 it is 21.6 which show they are conscious of taking balanced diet. Birth weight among 2007 group ranged between 1.1 to 4.5 kg mean being 2.1 kg while in 2017 it is 2.5kg- 4.5 kg mean being 3 kg.

S. No	Particulars	2007	2017
I	Initiation of BM	% (No)	% (No)
	< 3 hours	88.8 (447)	92.0 (138)
	Day 1	7.6 (38)	5.3 (8)
	Day 3	3.6 (18)	2.7 (4)
II	Pre lacteal Foods given		
	Breast milk	62.8 (316)	100.0 (150)
	Others	41.7 (210)	34.7 (52)
	Cow's Milk	11.3 (56)	4.0 (6)
III	Age of weaning		
	6 Months	73.3 (275)	50.7 (76)
	7 - 12 Months	23.3 (86)	38.7 (58)
	> 12 Months	2.4 (9)	10.6 (16)
IV	Mean Weight of Baby	2.1 kg	3 Kg
	Mean BMI of Mother	19.5	21.6

Table 3: Infant Feeding Practices.

Discussion

Infant feeding practices of present group are compared with those of a North Indian study (Table 4) In 2007 and 2017 literate mothers are more than the reported study (30.1%) Nuclear families increased in a decade in the present study from 47.6 to 86.7 may be due to several state sponsored welfare programs given family wise. In the North Indian group, nuclear families are around 54.4 percent indicating a trend towards heading for nuclear families. Increase in nuclear families may reduce interference of elders thereby adopt modern practices.

Particulars	2007 Study % (No)	2017 Study % (No)	North India* % (No.) (2012)
Literate Mothers	45.5 (229)	42 (63)	30.1
Illiterate Mothers	54.5 (274)	58 (87)	69.9
Nuclear Families	47.3 (238)	86.7 (130)	54.4
Joint Families	52.7 (265)	13.3 (20)	45.6
Initiation of BM <3hr	88.8 (447)	92.0 (138)	22.0
1 - 24hrs	7.6 (38)	5.3 (8)	70.0
1 - 3 days	3.6 (18)	2.7 (4)	8.0
Colostrum given	93.9 (338)	94.7 (142)	77.2
Introduction of semisolids < 6m	73.3 (275)	50.7 (76)	13.8 (30)

Table 4: Feeding Practices of infants as compared to Reported studies.

* Source: Syed E Mehmood [2].

In 2007 and 2017 initiation of breast milk within one hour (88.8%), feeding of colostrum (93.9%) and introduction of semi solids by 6 months (74.3%) are significantly more than the reported values of 22.8%,77.2%,13.85 respectively. Higher percent of literate mothers, nuclear families may be due to the ICDS, maternal and early childhood centers in operation; had a significant influence on adopting better infant feeding practices.

The introduction of MAA (Mother Absolute Affection) program will serve as a refresher course for older mothers and for modern mothers, a prescription not to withdraw the child from the breast at an early age, for cosmetic reasons or because of work pressure.

The present study done in 2007 and a decade there after in 2017 shows the impact of the programs on rural mothers for better practices. In spite of the improvement in infant feeding practices still malnutrition figures are alarming. The programs need to be strengthened and monitored.

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