

## INFANT AND YOUNG CHILD FEEDING PRACTICES IN GUNTUR DISTRICT-A CROSS SECTIONAL STUDY

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### ABSTRACT

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#### INTRODUCTION

Optimal Infant and Young Child-Feeding (IYCF) practices are crucial for nutritional status, growth, development, health, and ultimately the survival of infants and young children. It was estimated that, if 90% of infants are covered with a package of intervention to protect, promote, and support the optimal IYCF practices, almost one-fifth of overall under-five mortality can be averted.

#### OBJECTIVES

1. To study the socio-demographic characteristics of the Infants and Young children living in the rural areas. 2. To study the core Infant and Young Child Feeding indicators.

#### MATERIALS AND METHODS

A cross-sectional observational study was conducted in Venigandla village, the rural field practice area of NRI Medical College, Guntur, for a period of 4 months from January to April 2015. A total of 100 children aged 6-23 months were studied using a pre-tested semi-structured schedule. Data were entered in Microsoft Excel and analysed using Epi Info software.

#### RESULTS

Of the 100 children studied, majority of families belong to lower middle class (40%) according to BG Prasad socio-economic classification. One in 10 children was given pre-lacteal feeds after birth. Two-thirds of mothers breastfed their children within first hour after birth. Three fourths of children received exclusively breastfed up to 6 months of age. Minimum Dietary Diversity was observed in 74%, Minimum Meal Frequency observed in 94% and Minimum Acceptable Diet was observed in 70% of the 6-23 months children.

#### CONCLUSION

The IYCF practices were observed to be better in the present study when compared to similar studies done elsewhere in the country. Area specific programmes need to be created for providing comprehensive nutrition and health education for mothers, to protect, promote and sustain the optimal IYCF practices.

#### KEYWORDS

Breast Feeding, Infant and Young Child Feeding, Minimum Dietary Diversity, Minimum Meal Frequency, Minimum Acceptable Diet.

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**INTRODUCTION:** Optimal Infant and Young Child-Feeding (IYCF) practices are crucial for nutritional status, growth, development, health, and ultimately the survival of infants and young children.<sup>1,2,3</sup>

Worldwide, suboptimal breastfeeding still accounts for deaths of 1.4 million children aged less than five years. The timely introduction of complementary feeding can prevent almost 6% of under-five mortality.<sup>4</sup>

It was estimated that, if 90% of infants are covered with a package of intervention to protect, promote, and support the optimal IYCF practices, almost one-fifth of overall under-five mortality can be averted.<sup>4</sup>

The poor complementary feeding practices mean that many children continue to be vulnerable to irreversible outcomes of stunting, poor cognitive development, and significantly increased risk of infectious diseases, such as diarrhoea and acute respiratory infection.<sup>3,5,6</sup>

This has a tremendous impact in a developing country, like India, with a high burden of disease and low access to safe water and sanitation. Even in developed countries, recent studies<sup>7,8</sup> have underscored the role of IYCF practices in reducing child mortality.

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**OBJECTIVES:**

1. To study the socio- demographic characteristics of the Infants and Young children living in the rural areas.
2. To study the core Infant and Young Child feeding indicators- Minimum Dietary Diversity, Minimum Meal Frequency, Minimum Acceptable Diet.

**METHODOLOGY:** A cross-sectional observational study was conducted in Venigandla village, the rural field practice area of NRI Medical College, Guntur, for a period of 4 months from January to April 2015. Children aged 6-23 months residing in the village are the study subjects.

The population of the present study village is 7062 consisting a total of 1911 families residing in it. The crude birth rate in Guntur district is 17.8 per 1000 population according to 2011 census data. So there would be a total of 125 live births taking place every year in the village. Therefore, there would be around 190 children aged 6-23 months in the present study village. A total of 100 children aged 6-23 months were made part of the study, which forms more than 50% of the total.

All the households in the study village containing children aged 6-23 months were listed and the study households were selected by systemic random sampling method.

The study schedule is divided into three divisions, namely 1. Socio-Demographic Profile of the family, 2. Details regarding child aged 6- 23 months, 3. Core Indicators as per IYCF guidelines as given by The World Health Organisation and The UNICEF<sup>9</sup>, adopted by the Government of India<sup>10</sup> which includes- time of initiation of breastfeeding after birth, duration of exclusive breast feeding, duration of continued breast feeding, Minimum Dietary Diversity, Minimum Meal Frequency and Minimum Acceptable Diet.

The pre-tested semi-structured study schedule was administered to the mother of the children by interview technique after taking an informed consent. Institutional Ethical Clearance was obtained prior to the start of the study.

Data was entered in Microsoft Excel and analyzed using Epi Info software.

**RESULTS:**

**Socio-Demographic Profile:** Of the 100 children studied, 81% were living in own houses whereas 19% as tenants, 79% living in pucca, 12% in semi pucca and 9% in kutchha houses. Overcrowding is present in 87% of the households. The ventilation is unsatisfactory in nearly half (49%) of the households. 56% of the subjects were male and 44% were female children. 58% of them were living in joint families and 41% in nuclear families. One-fourths of them were Christians, 13% were Muslims and 62% Hindus. Only 21% children belonged to Upper Castes; whereas Scheduled Caste and Scheduled Tribe constituted 34% and 16% respectively. One-fourths of the mothers were illiterate, 57% mothers had only school level education, intermediate and above constituted only 18%. Three fourths of the

mothers were homemakers, 22% into unskilled jobs. Majority of families belong to lower middle class (40%), followed by upper lower 28%, and followed by Upper middle class 22% according to BG Prasad socio- economic classification 48% of the 6-23 months old children under the study are of birth order one, 39% are of birth order two, whereas 13% are of birth order three or more. Twelve per cent of the children were low birth weight babies (<2.5 kilograms). Home deliveries accounted for only 6% of the study population, the remaining were institutional deliveries, one third children delivered by Lower Segment Caesarean Section. No congenital anomalies were observed in the present study.

One in 10 children in the present study were given pre-lacteal feeds after birth, like, honey, buffalo milk, tulsii water, etc.

**Core Indicators of IYCF:**

**Initiation of Breastfeeding:** Two-thirds of the mothers breastfed their children within the first hour after birth, 15% did so within 1-3 hours. (Table 1)

BF Initiation	Frequency	%
<1 hour	65	65.0%
1-3 hours	15	15.0%
3-6 hours	8	8.0%
Up to 1 day	9	9.0%
>1 day	3	3.0%
<b>Total</b>	<b>100</b>	<b>100.0%</b>

**Table 1: Time taken for Initiation of Breastfeeding after birth**

**Duration of Exclusive Breastfeeding:** Three fourths of the mothers exclusively breastfed their children up to 6 months of age, 14% up to 4 months and 6% up to 5 months. Two mothers experienced lactational failure. (Table 2.)

EBF Duration	Frequency	%
4 months	14	14.0%
5 months	6	6.0%
6 months	75	75.0%
7 months	3	3.0%
Not Applicable	2	2.0%
<b>Total</b>	<b>100</b>	<b>100.0%</b>

**Table 2: Duration of Exclusive Breastfeeding**

All the 55 mothers of children aged 6-12 months would continue to breastfeed up to 1 year of age and most of the mothers would like to continue up to 2 years of age. 26 out of 43 mothers of children aged 13-23 months would continue to breastfeed up to 2 years of age.

**Minimum Dietary Diversity (M. D. D.):** MDD indicator reveals whether the child is receiving a complete and balanced diet or not. It is the proportion of children 6-23 months of age who receive foods from 2 or more food groups from a total of 7 food groups, namely, dairy

products, legumes and nuts, flesh foods, eggs, Vitamin A rich fruits and vegetables, cereals and tubers, and other fruits and vegetables.<sup>9</sup> MDD was observed in 74% of the children between 6-23 months. (Table 3).

No. of Food Groups Consumed	Frequency	%
0	9	9.0%
1	17	17.0%
2	7	7.0%
3	30	30.0%
4	29	29.0%
5	6	6.0%
6	2	2.0%
<b>Total</b>	<b>100</b>	<b>100.0%</b>

**Table 3: Minimum Dietary Diversity**

**Minimum Meal Frequency (M. M. F.):** MMF Indicator is the proportion of breastfed and non-breastfed children aged 6–23 months who receive solid, semi-solid, or soft foods (but also including milk feeds for non-breastfed children) the minimum number of times or more. For breastfed children the minimum number of times varies with age (two times if 6–8 months and three times if 9–23 months). For non-breastfed children, the minimum number of times does not vary by age (four times for all children aged 6–23 months).<sup>9</sup> MMF was observed in 94% of children aged 6-23 months and it was found to be highly significant. (Chi square= 18.4927 df=4 p=0.001).

**Minimum Acceptable Diet (M.A.D.):** M.A.D. indicator is the proportion of children aged 6–23 months who receive at least the MDD as well as at least the MMF according to the definitions mentioned above.<sup>9</sup> This was adequate in 70% of the 6-23 month old children.

**DISCUSSION:** In the present study nearly two-thirds of the children were put to breast within one hour of birth. National Family Health Survey-3 (NFHS-3) data at the national level showed it to be 23.4%.<sup>11</sup> Studies done in West Bengal had shown it to be 13.6%,<sup>12</sup> whereas in Delhi it was observed to be at 37.2%.<sup>13</sup> Initiation of breastfeeding was observed to be better in the present study than the national data as well as studies done elsewhere in the country.

Pre-Lacteal feeds were given to 10% of the children in the current study, which is much lower when compared with NFHS-3 data at the national level (57.2%),<sup>11</sup> Delhi Study in Urban Health Centre (38%),<sup>13</sup> West Bengal<sup>12</sup> (26.7%). The practice of giving pre-lacteal feeds is highly prevalent across cultures in various parts of the country. The IYCF guidelines state that Pre-lacteal feeds should not be given to the newborn.<sup>10</sup>

Exclusive Breastfeeding up to 6 months was observed in 75% of the children in the current study. This was better when compared with the national level data by NFHS-3 (46.4%),<sup>11</sup> Bankura district in West Bengal and Urban Health Centre in Delhi (both 57 %).<sup>12,13</sup>

Continued breastfeeding at one year was found to be 83% for children between 12 and 23 months. This is found to be higher when compared to urban children in Delhi (72.1%)<sup>13</sup> and lower than study from West Bengal (91.1%).<sup>12</sup>

Minimum Dietary Diversity was observed in 74% of the children between 6-23 months in the present study which is higher than that from the Delhi study (32.6%).<sup>13</sup>

Minimum Meal Frequency was observed in 94% of children aged 6-23 months, which is very good when compared to urban children from Delhi (48.6%).<sup>13</sup>

Minimum Acceptable Diet was found to be adequate in 70% of the 6-23 months old children in the current study which is far better when compared to urban children from Delhi (19.7%).<sup>13</sup>

NFHS-3 finds that only 44% of breastfed children are fed at least the minimum number of times recommended and only half of them also consume food from three or more food groups. Feeding recommendations are followed even less often for non-breastfeeding children. Overall only 21% of breastfeeding and non-breastfeeding children are fed according to the IYCF recommendations.<sup>11</sup>

NFHS-3 data from Delhi have reported that only 55% of children aged 6–23 months are fed the recommended minimum times per day and 48% are fed from the appropriate number of food groups. Only 34% are fed according to all three recommended practices.<sup>11</sup>

**LIMITATIONS:** Small sample size and the study conducted in a single village, may limit its representativeness.

**CONCLUSION:** The IYCF practices was observed to be better in the present study when compared to studies done elsewhere in the country as well as the national data. Even though MDD, MMF and MAD indicators were found to be good when compared to other studies in the country, there is a need on the part of the health staff to strive for area specific programmes for creating a good environment for comprehensive nutrition and health education for mothers, health functionaries to protect, promote and sustain the optimal IYCF practices.

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