

Breast Feeding Practices among the Mothers of Rural Field Practice Area of Department of Community Medicine, Osmania Medical College, Hyderabad

Manchu Kalyani¹, Sravanthi Gilla², Veereswara Rao Kurma³, Sujatha Pambi⁴, M. L. Surya Prabha⁵

¹Assistant Professor, Andhra Medical College, Visakhapatnam

^{2&4}Assistant Professor Kakatiya Medical College, Hanumakonda

³Associate Professor, Guntur Medical College, Guntur

⁵Professor, Government Medical College, Rajamahendravaram

Received: 14-02-2023 / Revised: 19-03-2023 / Accepted: 04-05-2023

Corresponding author: Dr. Sujatha Pambi

Conflict of interest: Nil

Abstract

Introduction: Breastfeeding has nutritional, immunological, behavioural and economic benefits and also provide desirable mother-infant bonding. The beneficial effects of breastfeeding depend upon appropriate breastfeeding practices (early initiation of breastfeeding as early as possible, no pre lacteal feeds, feeding colostrum, and giving exclusive breastfeeding till 6 months of age).

Aim and Objectives: (1) To enumerate the socio-demographic profile of the mothers with children in the age group 0-12 months of rural field practice area of Department of Community Medicine, Osmania Medical College, Hyderabad. (2) To assess breastfeeding practices among study population. (3) To determine the factors influencing breastfeeding practices.

Materials and Methods: A community based cross sectional study was conducted in Patancheru, a Rural Field Practice area of Department of Community Medicine, Osmania Medical College, Hyderabad from November 2013 to October 2014 after obtaining prior permission from the ethics committee. Mothers with children in the age group 0-12 months with a willingness to participate are included in the study.

Results: In the present study, 37.6% of mothers had initiated breastfeeding within 1 hour of delivery. About 85.2% of mothers had given colostrum to their babies and Prolacteal feeds were given by 91(36.4%) mothers. Among 130(52%) mothers with children in the age group of 6-12 months, exclusive breastfeeding was practiced by 51(39.2%) mothers. Feeding on demand was seen in 92.8% of mothers.

Conclusion: Continuous vigilance over infant feeding practices in the community is necessary for timely interventions, to ensure optimal growth and development.. The women who practiced breastfeeding practices according to norms should be made as role models and such women should be grouped as Mother Support Group at the community level.

Keywords: Exclusive Breast Feeding, Colostrum, Prolacteal feeds, Artificial feeds.

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Introduction

Breastfeeding is a natural physiological and an ideal way of feeding the infants. Breast milk is a boon to the child. Breastfeeding has nutritional, immunological, behavioural and economic benefits and also provide desirable mother-infant bonding. It contains antimicrobial factors such as macrophages, lymphocytes, secretory IgA, anti-streptococcal factor, lysozyme and lactoferrin which provide considerable protection not only against diarrheal diseases and necrotizing enterocolitis, but also against respiratory infections in the first month of life. [1] A breast-fed baby is likely to have an IQ of around 8 points higher than a non-breastfed baby. [2]

The new norms of infant and young child feeding (IYCF) are exclusive breastfeeding for the first 6 months (replacing the 4-6 months age range of earlier guidelines) and introduction of complementary foods at 6 months while continuing breastfeeding up to the age of 2 years or beyond. [2]

The beneficial effects of breastfeeding depend upon appropriate breastfeeding practices (early initiation of breastfeeding within 1 hour of normal delivery and 4 hours of caesarean section, no pre lacteal feeds, feeding colostrum, and giving exclusive breast feeding till 6 months of age). Early initiation of breastfeeding is extremely important for establishing successful lactation as well as for providing colostrum to the baby. Giving colostrum has also been called as the “first immunisation” of the child. [3] Exclusive breastfeeding during the first 6 months of life has been associated with a lower incidence of diarrhoea and respiratory disease in infants, particularly in under-developed countries. [4]

Lactating women seem to regain their pre-pregnant weight soon, and in the long terms, reduces the risk of obesity, breast cancer, ovarian cancer, osteoporosis and fertility. From the community and family

perspective, moreover, breastfeeding reduces fertility in the mother, perhaps for several months, affording a natural form of birth spacing. [5] In spite of availability of varied modern family planning methods, breastfeeding acts as a natural method of contraception to a certain extent in a developing country like India.

Only 35% of infants world-wide are exclusively breastfed during the first four months of life and complementary feeding begins either too early or too late with foods which are often nutritionally inadequate and unsafe. [6] As per NFHS - 3 data 3 69% of children under two months of age are exclusively breastfed, which further drops to 51% at 2-3 months of age and 28% at 4-5 months of age. [7]

In an effort towards achieving better breastfeeding practices, United Nations Children’s Fund (UNICEF) and WHO launched the Baby Friendly Hospital Initiative (BFHI) in 1991 to ensure that all maternity facilities support mothers in making the best choice about feeding. [8]

World Breastfeeding Week was first celebrated in 1992 by World Alliance for Breastfeeding Action (WABA) and is now observed in over 120 countries by UNICEF, WHO and their partners including individuals, organizations, and governments.

The Infant Milk Substitutes, Feeding Bottles And Indian Foods Act 1992 and Infant Milk Substitutes Act 2003 has been adopted in India to promote exclusive breastfeeding for first six months and continued breastfeeding for at least two years of age. [9]

Studies have shown socio demographic factors play a major role in influencing mothers. Continuous vigilance over infant feeding practices in the community is necessary for timely interventions, to ensure optimal growth and development.

This information will be useful to policymakers for the formulation of interventional programs in the future.

Aim: To assess breastfeeding practices among the mothers with children in the age group 0-12 months of rural field practice area of Department of Community Medicine, Osmania Medical College, Hyderabad.

Objectives: (1) To enumerate the socio-demographic profile of the mothers with children in the age group 0-12 months of rural field practice area of Department of Community Medicine, Osmania Medical College, Hyderabad. (2) To assess breastfeeding practices among study population. (3) To determine the factors influencing breastfeeding practices.

Materials & Methods

A community based cross sectional study was conducted in Patancheru, a rural field practice area of Department of Community Medicine, Osmania Medical College, Hyderabad from November 2013 to October 2014 after obtaining prior permission from the ethics committee. It has 3 subcentres with 15 villages and a total population of 23,208. The study population includes Mothers with children in the age group of 0- 12 months.

Sample Size: Crude Birth Rate of India for the year 2012 by UNICEF is 20.7 per 1000 population.

Expected number of live births per year

$$= (\text{birth rate per 1000 population} \times \text{population of the area}) / 1000$$

$$= (20.7 \times 23,208) / 1000$$

$$= 481$$

Sample size was taken as 50% of the expected number of live births (50% of 481=241) which was rounded off to 250.

The first village was selected by simple random lottery method and subsequently every alternate village was selected. A total of 8 villages with the population of 11863

were selected for the study. A house to house survey is conducted and about 32 (250/8) mothers with children in the age of 0-12 months from each village were included in the study until the sample size of 250 was reached. The study subjects were interviewed personally by the investigator in their local language with the help of predesigned, pretested and precoded proforma which is prepared with the help of faculty members.

Inclusion Criteria: Mothers with children in the age group 0-12 months with a willingness to participate in the study.

Exclusion Criteria:

- (i) Mothers not available in the household at the time of the visit.
- (ii) Mothers who were sick.
- (iii) Mothers with sick children.
- (iv) Mothers who have not given consent.

Data was entered using Microsoft Excel 2007 version and by using Epi info version 7. Frequency tables and graphs have been used to represent data. Data was summarized in percentages.

Results

Out of 250 study population, majority of the mothers 173 (69.2%) were in the age group of 20-24 years followed by 67 (26.8%) in 25-29 years age group. The mean age of the mothers was 23.46 years and the median was 23 years. Majority of the study subjects 178 (71.2%) belonged to nuclear families followed by 40 (16%) to three generation families and 32 (12.8%) to joint families.

Out of the 250 mothers, majority of them 87 (34.8%) had primary education, 66 (26.4%) had secondary education, 44 (17.6%) studied up to intermediate, 15 (6%) were graduates and 38 (15.2%) were illiterates. With regard to socio economic status of the respondents, majority of them 81 (32.4%) were from lower middle class, 76 (30.4%) from upper lower class, 44 (17.6%) from lower class, 38 (15.2%) from upper middle and 11 (4.4%) from upper class.

Majority 227 (90.8%) mothers received counselling regarding benefits and management of breastfeeding during antenatal period. Majority 245 (98%) of deliveries were conducted in hospital and 5% deliveries conducted at home. 182 (72.8%) of mothers had vaginal delivery, 64 (25.6%) had caesarean section and the remaining 4 (1.6%) had instrumental delivery. Among 250 mothers, 124 (49.6%) were primipara and 126 (50.4%) were multipara.

In the present study among 250 infants, 120(48%) are in the age group of 0-6 months and 130(52%) in 6-12 months. Out of them, 129(51.6%) are males and 121(48.4%) are females.

In the present study 247 (98.8%) infants were breastfed and 3 (1.2%) were not breastfed. Only 37.6% of mothers had initiated breastfeeding within 1 hour of delivery followed by 23.2% fed within 1 – 4 hrs, 14% fed within 4-6 hrs. In the present study late initiation of breastfeeding was observed in 63.2% of illiterates and 58.5% of literates. It was observed that 91.3% of the mothers who have not received counselling during antenatal period initiated breastfeeding late when compared to 55.9% who received.

Prelacteal feeds were not given by 159(63.6%) mothers out of a total of 250. Tinned milk powder 37(40.6%) was the most common pre lacteal feed followed by animal milk 30 (33%), sugar water 13 (14.3%), honey 6 (6.65) and others 5 (5.5%).

Among 250 study subjects, 102(40.8%) mothers initiated breastfeeding early i.e., within 1hr in case of vaginal delivery and within 4 hrs in caesarean section. Among 64 (25.6%) mothers who underwent caesarean section majority 54(84.4%) initiated breastfeeding late.

About 85.2% of mothers had given colostrum to their babies and 14.8% of mothers discarded colostrum. In the present study, among 38(15.2%) illiterates, 12 (31.6%) discarded colostrum when compared to 25(11.8%) among 212(84.8%) literate mothers. Out of 227(90.8%) who received counselling regarding breastfeeding during antenatal period, majority i.e 198(87.2%) gave colostrum. Out of 5(2%) home deliveries it was observed 4(80%) discarded colostrum compared to 33(13.5%) out of 245(98%) hospital deliveries.

Among 130(52%) mothers with children in the age group of 6-12 months, exclusive breastfeeding was practiced by 51(39.2%) mothers. Among 130 mothers with children in age group of 6-12 months, 49% of mothers who had vaginal delivery practiced exclusive breastfeeding compared to 9.4% who underwent caesarean section which was statistically significant. Feeding on demand was seen in 92.8% of mothers.

Among 23(100%) mothers who stopped breastfeeding within a year, 15 (65.2%) stopped between 6-12 months. The most common reasons for cessation of breastfeeding were inadequate breast milk in 34.8% and to return to work in 21.8%. Artificial feeding was given to (18.4%) 46 of infants below 6 months of age. Among those who started artificial feeding, majority of them 26.1% started in 1st month followed by 5th month. Most common reason for initiation of artificial feeding was inadequate breast milk. Majority of infants 23(50%) were given tinned milk powder followed by cow's milk 11(23.9%).

Among 250 infants, 141 were given complementary feed. Among them 42(29.8%) of mothers weaned their children before 6 months, 61(43.3%) at 6 months and 38(27%) after 6 months.

Table 1: Demographic profile of study population

Variables	Frequency	Percentage
Mother's Age (years)		
<20	4	1.6
20-24	173	69.2
25-29	67	26.8
30-34	5	2.0
35 &>35	1	0.4
Mother's Literacy		
Illiterates	38	15.2
Primary School	87	34.8
Secondary School	66	26.4
Intermediate	44	17.6
Graduation &above	15	6.0
Socio-economic Status		
Class I (Upper)	11	4.4
Class II (Upper Middle)	38	15.2
Class III (Lower Middle)	81	32.4
Class IV (Upper Lower)	75	30.0
Class V (Lower)	45	18.0
Place of Delivery		
Home	5	2.0
Hospital	245	98
Type of Delivery		
Normal (vaginal)	182	72.8
Caesarean section	64	25.6
Instrumental	4	1.6
Mother's Parity (Birth Order)		
Primipara	124	49.6
Multipara	126	50.4

Table 2: Breast feeding practices

Breast Feeding Practice	Frequency	Percentage
When did you initiate breastfeeding? (hrs)		
<1	94	37.6
1-4	58	23.2
4-6	35	14.0
6-12	17	6.8
12-24	27	10.8
>24	19	7.6
Exclusive Breast Feeding		
Practiced	51	39.2
Not practiced	79	60.8
Cessation of breastfeeding		
0-6 months	8	34.8
6-12 months	15	65.2
Did you discard the colostrum?		
Yes	213	85.2

No	37	14.8
Prelacteal feed before starting breastfeeding?		
Yes	91	36.4
No	159	63.6
If yes what did you feed?		
Sugar water	13	14.3
Honey	6	6.6
Animal milk	30	33
Tinned milk powder	37	40.6
Others	5	5.5

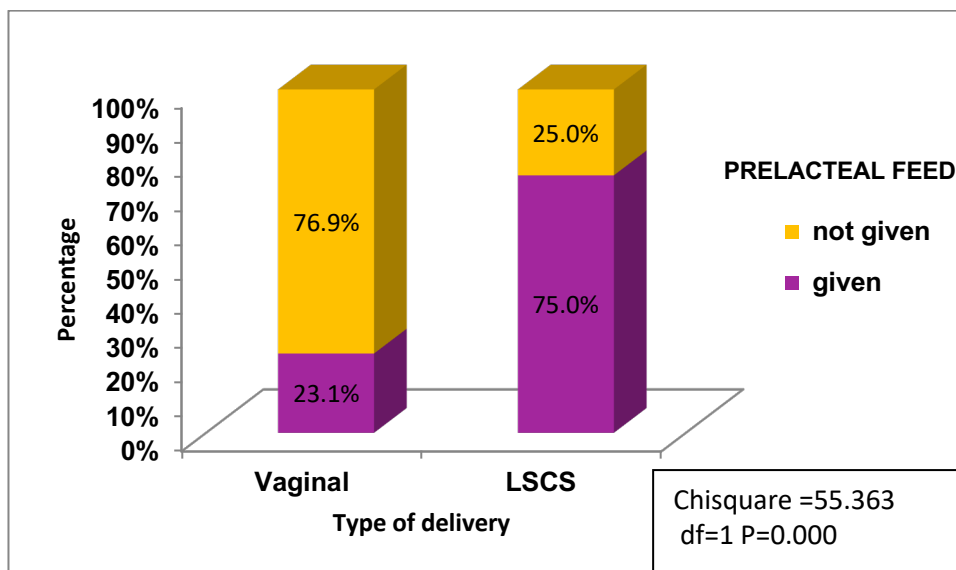


Figure 1: Relation between type of delivery and pre lacteal feeding.

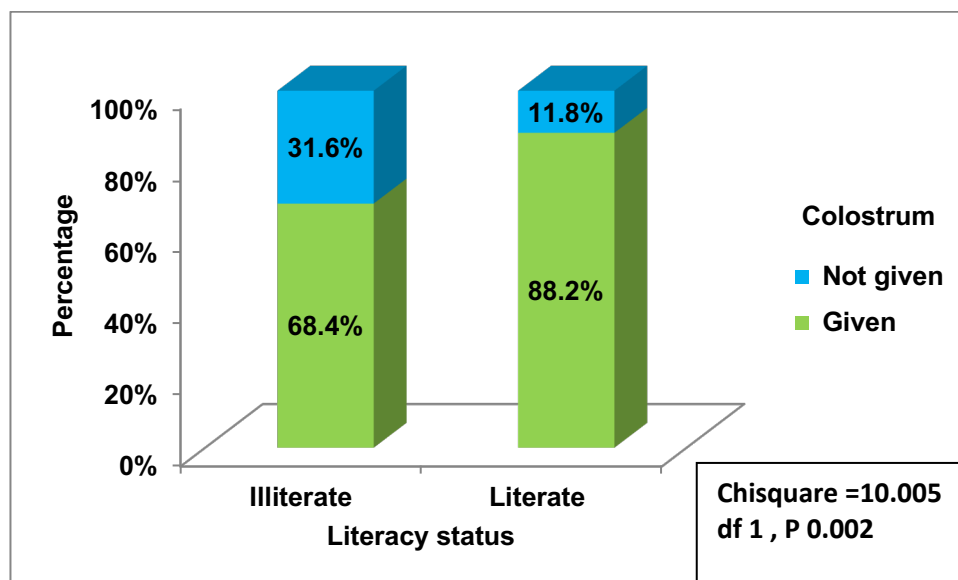


Figure 2: Relation between literacy status of mothers and colostrum feeding.

Discussion

The present study was conducted in Patancheru, Rural Field Practice area of

Department of Community Medicine, Osmania Medical College, Hyderabad where 250 mothers with children in the age

group of 0-12 months were included to assess the breastfeeding practices.

In the present study, majority of mothers (69.2%) were in the age group of 20 - 24 years which is similar to the study conducted by Madhu K et al (2009) [10] in Kengeri, rural Bangalore where majority of the mothers (60%) were between the ages of 21 to 25 years.

In present study 37.6% of mothers initiated breastfeeding within 1 hour of delivery which is in concurrence with DLHS-4 report of Medak district where the initiation of breastfeeding within one hour of birth was 44.6%. In contrast, 21.6% mothers initiated their child on breastfeeding within one hour of birth in study by Tanu Midha (2010) [11] in Kanpur whereas 51% mothers by Adhisivam B et. al (2006) [12] in Pondicherry.

In the present study 36.4% of children received pre lacteal feeds which is in concurrence with Nitin Joseph et al (2013) [15] in Karnataka where 33.5% received prelacteal feed. In contrast, in a study by Hiremath BR et al (2013) [14] in Karnataka 66.1%; by Midha T et al (2010) [11] in Kanpur 72.7% received pre-lacteal feeds. This difference can be attributed to social customs prevailing in the areas.

In the present study, tinned milk powder 42 (46.1%) was the most common pre lacteal feed. Sugar water was the most common prelacteal feed in the study by Hiremath BR et al (2013) [14] in Bijapur (49.6%), by Nitin Joseph et al (2013) [15] in Karnataka(63.1%), by Adhisivam B et. al (2006) [12] in Pondicherry (23%).

In the present study 85.2% of mothers fed colostrum to the infants and 14.8% of them discarded colostrum. This is in concurrence with Wadde S. K et al (2011) 6 study in Maharashtra where 91.18% of mothers had given colostrum . In a study conducted by Kumar D et al (2006) [13] in Chandigarh 15.9% of mothers discarded colostrums.

In the present study 39.2% of mothers practiced exclusive breast feeding for 6 months. Similar to present study exclusively breastfed for six months was practiced by 41% of mothers in the study by I.I.Meshram et al (2012) 18 in Andhra Pradesh; 34% of mothers by Radhakrishnan S et al (2012) [17] in Tamil Nadu; 40% of the mothers by Madhu K et. al (2009) 10 in Kengeri, rural Bangalore and 37% of mothers by Chudasama et. al (2009) [19] in Gujarat. Our study results did not correlate with Adhisivam B et. al (2006) [12] in Pondicherry where 60%mothers practiced exclusive breast feeding.

In the present study counselling regarding breastfeeding during antenatal period ($X^2=10.81$, $P=0.001010$) and type of delivery($X^2=22.57$, $P<0.0001$) were significantly associated with initiation of breastfeeding. Ahmad MO et al (2012) [21] in Rawalpindi observed that 96% mothers in counselled group initiated breastfeeding immediately after birth compared to 84% in non-counselled group and the difference was statistically significant.

In the present study, feeding on demand was seen in 92.8% of mothers. Similar findings were observed in Madhu K et al (2009) [10] in Kengeri, rural Bangalore study where 84% of mothers breast feed on demand and in Col PMP Singh et al (2007) [20] study among the armed forces community in a large cantonment 89.14% of mothers practiced. Present study findings differed from the study by S. K. Rasanian et al (2003) 22 where 67.3% breast fed their children on demand and 32.7% breast fed their children according to a fixed schedule.

In present study 18.4% of infants received artificial feeding before 6 months of age. In a study done by Madhu K et al (2009) [10] in Kengeri, rural Bangalore, 26% mothers started commercial feed by 6 months.

In present study, 58.7% cited inadequate breast milk as the reason for starting artificial feeding. This study finding were in accordance with R.R. Kalsa et al (1995)

[16] study were common reason to start artificial feeding was perceived inadequate supply of breast milk in 57.6%. [23]

In present study, 43.3% of mothers started complementary feeding at 6 months. A similar finding was noted by Madhu K et al (2009) [10] in Kengeri, rural Bangalore study where 40% of mothers had started weaning correctly at 6 months.

Conclusion

This study emphasizes the need for intensive breastfeeding intervention and antenatal counselling programs especially for the women who visited the hospital during their antenatal and postnatal check-ups. The counselling should be continued after the delivery of baby for continuous education to mother about the proper care of newborn, initiation of breastfeeding, the information regarding the advantages and duration of breastfeeding, importance of colostrums feeding, timing of weaning needs to be provided.

The women who practiced breastfeeding practices according to norms should be made as role models and such women should be grouped as Mother Support Group at the community level. Special attention to the nutritional needs of the girl child, adolescents, and women have to be considered to improve breast feeding practices as inadequate breast milk was the common cause for introduction of artificial feeds

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