A Study on Breast Feeding and Weaning Practice in Infants Attending Well Baby Clinic of Tertiary Care Hospital in Jamnagar

Sumit Unadkat[1], Mubashshera Firdous Khan[2], Archana J Solanki[2], Mittal Rathod[3], Billav Rojasara[2], Vishal Vagadiya[2]

[1]Associate Professor, [2]Resident, [3] Tutor, Community Medicine Department, M. P Shah Govt. Medical College, Jamnagar, Gujarat, India

Correspondence : Dr. Mubashshera Firdous Khan, E mail: mubashshera_khan@rediffmail.com

Abstract:

Introduction: Infant feeding practices have significant effects on both mother and child. Breastfeeding improves the nutritional status of young children and reduces morbidity and mortality. Breast milk not only provides important nutrients but also protects the child against infection. The timing and type of supplementary foods introduced in an infant's diet also have significant effects on the child's nutritional status. This study was carried out to find out the early infant feeding practice and its determinant in well baby clinic of tertiary care hospital in Jamnagar. **Method:** this was a cross sectional study. 240 mothers with baby under one year of age attending the well baby clinic were included in the study and the data was collected using a pretested, structured questionnaire. The study was done for three month from October 2015 to December 2015. Results were analyzed using percentage and Chi Square test. **Results:** about 65% women had initiated breast feeding within 1 hour of delivery.55.8% mother had given prelacteal feed to their baby and the most common prelacteal feed given was honey. Literacy of mother, institutional delivery and normal vaginal delivery were some positively associated factor with early infant feeding practice. Most common reason of late initiation of breast feeding was caesarean section in present study. **Conclusion:** Sincere effort is needed to counsel the mother about early initiation of breast feeding practice and avoidance of prelacteal feed.

Key Words: Breast Feeding, Prelacteal Feed, Weaning.

Introduction:

Childhood malnutrition is a major factor for childhood morbidity and mortality. According to National Family Health Survey-3 (NFHS-3) data the level of under nutrition in children below three years of age was as high as about 45%. Under nutrition of these children is majorly related with breast feeding and complementary feeding practice. Early initiation of breast feeding (within an hour of birth) had found to decrease neonatal mortality by 22 %.[1]

The World Health Organization recommended exclusive breast feeding for the first six month of baby's life and addition of complementary feeds at six months with continued Breast Feeding (BF) till two years to reduce the burden of malnutrition. Correct Infant and Young Child Feeding (IYCF) practice plays a major role in reducing the morbidity and mortality of children.

Likewise, early initiation of breast feeding is very much essential for survival, growth and nutrition of newborn. In addition it is also known for good brain development and learning ability and protecting the child from infection.[2]

It has been said that infants aged 0-5 months who are not breastfed have seven-fold and five-fold increased risks of death from diarrhea and pneumonia, respectively compared to exclusively breastfed infants.[3]

Breast Feed is the first fundamental right of the child. The initiation of breast feeding and the timely introduction of adequate safe and appropriate complementary foods in conjunction with continued

breast feeding are of prime importance for the growth, development, health and nutrition of infants and children everywhere. However, there are many cultural practices associated with infant feeding of which certain undesirable practices need to be discouraged. One in every third malnourish child in world lives in India. [4] UNICEF and WHO launched Baby Friendly Hospital Initiative in 1992 as a part of global effort to protect, promote and support breast feeding. [5]

Education of mother, socioeconomic class of family, social customs like avoidance of colostrum and giving prelacteal feed etc. affect the feeding practices directly or indirectly. Current study has focused on some of the core indicators of IYCF practices to reflect upon the prevailing feeding problem in the urban area of Gujarat state.

The main objective of study was to know the early breast feeding and weaning practice in infants attending well baby clinic of tertiary care hospital of Jamnagar city.

Method:

Study design: A cross sectional study was conducted at Well-baby clinic of Guru Govind Hospital, Jamnagar following ethical clearance from institutional ethics committee

Study period: 3 month, from October 2015 to December 2015.

Study setting: Study was conducted in well baby clinic of tertiary care hospital of Jamnagar city.

Criteria for selection of sample: Children under one year of age who visited the well-baby clinic for the immunization were included in the study. The information about the breast feeding and weaning practice of children was collected from mothers after obtaining oral consent; those who were not willing to participate were excluded. The data was collected every alternate day. A pretested structured questionnaire was used for data collection over the period of three month. Mothers coming for immunization were interviewed. The questionnaire contains socio demographic data, detail on initiation and duration of breast feeding, also weaning practice.

Data entry was done using Microsoft office Excel 2007 and analysis was done in SPSS 20. Appropriate statistical test were applied during data analysis.

Following definitions were used in present study.

Early Initiation of breast feeding- The breast feeding should be started within first hour of birth.

Pre lacteal feeding is any food other than breast milk given to the new-born after birth before initiating breast feeding.

Exclusive Breast Feeding (EBF) is no other food or drink, not even water, except breast milk for 6 months of life, but allows the infant to receive ORS, drops and syrups (vitamins, minerals and medicines).

Weaning is a gradual process starting around age of six month, because the mother milk alone is not sufficient to sustain growth beyond six month, it should be supplemented by suitable food rich in protein and other nutrients. These foods are called supplementary food. [5]

Results:

Current study involve 240 mother with their child lees than one year of age .Regarding the age distribution of mother, out of total 240 women, majority of women i.e. 43.3% belong to age group of 25-29 years, 35.8% belonged to 20-24 years,19.16% were $\geqslant$ 30 years and only 1.6% were $\leqslant$ 19 years. Religion wise, majority of the participant i.e. 73.3% were Hindu, rest were Muslim. **(Table 1)** In present study 23.7% were illiterate, 76.3% were literate. Very few (6.6%) were qualification graduate and above. Most of the women i.e. 87.9% were house wives, 8.3% were laborer and 3.8% were doing skilled job. Study revealed that almost all i.e. 98.8% women had taken antenatal care in their recent birth. Majority of women i.e. 80% delivered in government institution, 15% in private hospital and 5% delivered

at home. Out of total 240 women, 78.8% women were delivered by normal vaginal route and 21% were undergone caesarean section.

In present study, 56.3% infant were ⩾ 6 month of age and 43.8% were of less than 6 month of, age of which, 51.6% were male babies and 48.3% were female babies. Majority of babies i.e. 69.1% were of 1st order birth, 37.5% were of 2nd order birth and 18.35% were of 3rd order and above.

Table 1: Socio demographic profile of study sample (N=240)

Parameters		Number	%
Age of mother (in years)	≤19	4	1.6%
	20-24	86	35.8%
	25-29	104	43.3%
	≥30	46	19.1%
Literacy status of mother	Illiterate	57	23.7%
	Primary	32	13.3%
	Secondary	103	42.9%
	Higher Secondary	32	13.3%
	Graduate & Above	16	6.6%
Occupation of mother	House Wife	211	87.9%
	Labourer	20	8.3%
	Job	9	3.8%
Religion	Hindu	176	73.3%
	Muslim	65	26.7%
Age of the child (in month)	≥6	135	56.2%
	<6	105	43.7%
Gender of child	Male	124	51.6%
	Female	116	48.3%
Birth order of child	1	166	69.1%
	2	90	37.5%
	3 & above	44	18.3%
Place of delivery	Government Hospital	192	80%
	Private Hospital	36	15%
	Home	12	5%
Mode of delivery	Normal vaginal delivery	186	78.8%
	Caesarean section	51	21.3%

Table 2: Distribution of study participants according to breast feeding and weaning practice

Parameters		Number	%
Timing of initiation of Breast Feeding N=240	Within 1 hour	156	65%
	Within 24 hours	16	6.6%
	After 24 hours	64	26.6%
	No BF	4	1.6%
Prelacteal feed	Yes	86	35.8%
	No	154	64.1%
Most common prelacteal feed N=86	Honey	33	38.3%
	Water	20	23.2%
	Jaggery water	18	20.9%
	Other milk	15	17.4%
Initiation of weaning N=135	<6 month	22	16.2%
	6 month	79	58.5%
	>6 month	34	25.1%
Exclusive breast feeding practice N=135	Yes	94	69.6%
	No	41	41%
Feeding practice in infant <6 months N=105	EBF	96	91.4%
	BF + water	6	5.7%
	Other milk	3	2.8%

Table 3: Reason for late initiation of Breast Feeding (n=84)

Reasons	Number	%
Caesarean section	33	39.2%
Culture, beliefs	17	20.2%
Lack of prenatal guidance on advantage of BF	13	15.4%
HIV Infection	9	10.7%
Breast problem(inverted nipple, engorgement)	7	8.3%
Maternal complication(eclampsia, PPH)	5	5.9%

(Table 2) It was observed that 65% women had initiated breast feeding within one hour of delivery, 6.6% fed their babies within one day and 26.6% mother started breast feeding after 24 hours. In present study 4 mothers were not at all breast fed their babies. It was found that 35.83 %(n=86) mother had given prelacteal feed to their babies, most common prelacteal feed was honey (n=33), next come the plain water (n=20), jaggery water (n=18) and other milk (n=15). Other milk were formula milk, goat milk, cow milk.

Table 4: Association between maternal factors and initiation of breast feeding within 1 hour

Maternal Variable	Initiation of breast feeding within 1 hour						Statistics
	Yes		No		Total		
	No	%	No	%	No	%	
Maternal Education							
Illiterate	26	45.6	31	54.3	57	23.7	
Primary	24	75	8	25	32	13.3	Chi-square
Secondary	74	72,8	29	27.1	103	42.9	=13.889
Higher Secondary	22	68.7	10	31.2	32	13.3	P<0.05
Graduate and Above	10	62.5	6	37.5	16	6.6	
Religion							Chi square
Hindu	114	64.7	62	35.2	176		=0.015
Muslim	42	67.1	22	32.8	64		p>0.05
Mother age (in years)							
<19 yr	2	50	2	50	4	1.6	Chi square
20-24 yr	57	66.2	29	33.7	86	35.8	=0.474
25-29 yr	67	64.2	37	35.5	104	43.3	p>0.05
>30 yr	30	65.2	16	34.7	46	19.1	
Place of Delivery							Fischer
Institution	156	68.4	72	27.1	228	95	exact test
Home	0	0.0	12	100	12	5	P<0.001
Mode of delivery							Chi square
Normal vaginal delivery	139	73.5	50	26.4	189	78.8	=25.97
Caesarean section	17	33.3	34	66.6	51	21.3	P<0.001

Most common reason for late initiation (after 1 hour) was the caesarean section and culture, beliefs in present study. Other reasons were breast problem (inverted nipple, breast engorgement), maternal problem (eclampsia, PPH), lack of prenatal guidance on advantage of exclusive breast feeding (Table 3)

There were 135 babies aged ⩾6 month of age, of which 94 babies (69.6%) were exclusively breast fed for six complete month and 41 babies (30.3%) were not exclusively breast fed. Nearly half i.e. 79 babies (58.5%) were started on weaning food at correct age i.e. six month,22 (16.2%) mothers started weaning prematurely and 34(25.18%) did it after six month.

Most common reasons for early weaning were insufficient milk and lack of advice given about correct age of weaning by health personnel.

(Table 4) On seeing the factor associated with early initiation of breast feeding, it was found that literate mothers were more aware about early initiation of breast feeding. The association between literacy of mother and practice of early initiation was found to be significant at p<0.05. The women who delivered in institution were more (68.4%) practicing early initiation of breast feeding as compared to home delivery. In present study none of the women who delivered at home initiate breast

feeding within 1 hour. The association between place of delivery and early breast feeding practice was found highly significant statistically at p<0.001. Women with normal vaginal delivery (73.5%) had earlier started breast feeding as compared to women who delivered by caesarean section (33.3%). This comes out to be highly significant statistically. The reason behind that women who delivered by normal vaginal rout are more comfortable as compared to those who undergone caesarean section. Slightly higher proportions of Muslim women (67.1%) were started early breast feeding than Hindu women (64.7%).The above data was not found to be significant. On seeing the effect of mother age on early breast feeding practice, though it was found that as the age increases mothers were more practicing early breast feeding. But the association between age of the mother and early initiation of breast feeding was not found significant statistically.

Discussion:

According to guidelines of infant and young child feeding (IYCF), women should start breast feeding within 1 hour of delivery. [6] Present study was found that 65% women had started breast feeding within one hour of delivery. The data from National Family Health Survey-3 (2005-2006) shows that 30.3% mother's started early breast feeding in urban area. [1] This comparison shows that there has been major improvement in the mentioned indicator since 2006. Coverage evaluation survey (2009) [7] found that 50% women had initiated breast feeding within 1 hour of delivery in Gujarat. Another study conducted in Ahmadabad by Bhavik M Rana et al (2016) [8] found in his study similar result i.e. 66% mother initiated early breast feeding. Sunjay V Wagh et al (2013) [9] in Akola found more proportion (80.4%) of same indicator.

Khyati N (2016) [10] found (35.1%), Asif Khan et al (2013) [11] found (28.14%), Devang Raval et al (2011) [12] found (38.1%) of early breast feeding practice which is less than present study. Most common reason for late initiation of breast feeding were caesarean section and culture and beliefs in our study, other reason were maternal complication at the time of delivery, breast problem and lack of advice given by health personnel. Asif Khan et al (2013) [11] found in his study that either the mother did not know the importance of breast feeding or due to inability to express milk or mother illness were most common reason for late initiation of breast feeding. Sunjay V Wagh et al (2013)[9] found that, cesarean section, delivery complication, baby was in NICU and milk not produced immediately were the reasons of late initiation of breast feeding. This shows the lack of knowledge of advantage of early initiation of breast feeding.

35.83% mother or their relatives had given prelacteal feed to babies, it shows prelacteal feed is still a prevalent practice. NFHS-3(2005-2006)[1] data revealed that in Gujarat 57% women /relatives had the practice of giving Prelacteal feed to babies. It shows that there is substantial decrease in practice of giving prelacteal feed; it may be due to awareness created by health worker. Bhavik M Rana et al (2016)[8] in his study in Ahmadabad found that the number of mothers who gave pre-lacteal feed to their new born was 11 (2.75%). Devang Raval et al (2011) [12] found that 61.6% women given Prelacteal feed to their babies. The above studies show the lower proportion as compared to present study, it may be due to different area of study.

There is need to counsel the mother to avoid Prelacteal feed and start breast feeding as early as possible. Most common prelacteal feed given was honey followed by plain water, Jaggery water and other milk in present study. Wagh et al (2013)[9] revealed in his study the most common prelacteal feeds (61.5%) were honey , cow's milk(30.7%) and sugar water(7.68%). Other study also found the honey, sugar water and cow's milk the common prelacteal feed. [11]

In present study, 135 babies were ⩾ 6 month of age , and the exclusive breast feeding practice and weaning practice was explored in these babies. Of these 135, 69.6% babies were exclusively breast fed for complete six month. According to DLHS-3(2007-2008) [13] data of Gujarat 40% children were exclusively breast fed, this shows that there is

considerable increase in EBF practice and it may be due to counseling done by health personnel and created awareness among women while attending ANC &PNC services. Bhanderi et al (2011) [14] found the similar result, in his study found that 76.6% babies of age>4 month were exclusively breast fed. Asif Khan et al (2013) [11] found the proportion of EBF babies were 35% which is lower than present study. Bhavik M Rana et al (2016) [8] found the 66% of EBF practice, similar to present study.

In our study 58% women started weaning at correct age, this finding was similar to study done in Nigeria [15], in which 45% babies were started weaning at correct age. In contrast to these finding Asif Khan et al (2013) [11] shows that 35% mother started weaning at 6 month of age, 16.2% were started weaning prematurely before six month and 25% started after six month. It shows the lack of knowledge among mother about correct age of weaning. If weaning food is not administered at correct age it may adversely affect the babies' heath, premature administration lead to increase chances of infection whereas late initiation may lead to deficiency of nutrients and baby may prone to malnourishment.

In our study it was found that mother literacy status, place of delivery and mode of delivery was statistically significant with early initiation of breast feeding practice within 1 hour. Mother's age and religion of mother was not found significant. Khyati Nimavat et al (2016) [10] in her study conducted in same district found the similar result, a significant association between early initiation of breast feeding practice with place of delivery and mode of delivery.

Similar result was found in a study conducted by Bhanderi et al (2011) [14] in Anand district, in which place of birth and maternal education was found significant at $p<0.05$ with early initiation of breast feeding, mother age was not found significant in this study. These shows that institutional delivery has positive impact on early feeding practice, so mother should be motivated to delivered at institution. Government had initiated many schemes to increase institutional delivery but sustained effort is needed to achieve 100% institutional delivery. Mother came to Antenatal Care (ANC), Postnatal Care (PNC) to the health centre, it should be utilized as an opportunity to counsel the mother and make aware them about the advantage of early infant feeding, correct age of weaning practice.

Conclusion:

The current study provides a perspective regarding prevalent IYCF practices in urban area of India. The study shows that the IYCF indicators are not up to the mark and improvement in the IYCF indicators is the need of the hour to reduce Infant Mortality Rate (IMR) in India. There is need to educate mothers during antenatal advice about breast feeding and weaning practice. The observation reflects adversely on part of health worker in preparing the mother for the future role of motherhood. Also observation indicate that health worker have been unsuccessful in rooting out this deeply rooted unhealthy socio culture practice.

Declaration:

Funding: Nil

Conflict of interest: Nil

References:

1. International Institute for Population Sciences and Macro International (September 2007). "National Family Health Survey (NFHS-3), 2005-2006". Ministry of Health and Family Welfare, GOI. Available from: http://www.measuredhs.com/pub/pdf/FRIND3/FRIND NFHS-3 2005-06.(last accessed on 2016 December 5)
2. Bio medical central, blog network by Manoj Kumar Pati 11 September 2015.
3. Pelletier DL, Frongillo EA Jr, Schroeder DJ, Habicht JP. The effects of malnutrition on child mortality in developing countries. Bull World Health Organization. 1995; 73:443-8.
4. UNICEF Report, 2009
5. K. Park. Park's Text book of Preventive and Social Medicine. 23rd ed. Jabalpur: Banarsidas Bhanot Publishers: 2015
6. Ministry of Women and Child Development-Government of India. National guidelines on IYCF, 2010.accessed on 30 October 2016.
7. Government of India and UNICEF. Coverage evaluation survey, 2009. In: UNICEF, eds. United Nation Childrens' Fund. New Delhi: UNICEF; 2010.
8. Rana BM, Chandwani H, Sonaliya KN, Prajapati A. A descriptive study to assess factors affecting core indicators of infant and young child feeding practices in urban area of Gujarat State, India. Int J Community Med Public Health 2016; 3:1101-6.

9. Wagh S V, Wagh S S,Raut M M, Dhambare D G, Sharma D A. A study of breast feeding practices in Vidharbha region of Maharashtra, India. Innovative Journal of Medical & Health Science 3:5 September-October (2013) 238-241.

10. Nimavat K A , Mangal A D, Unadkat S V, Yadav S B.A study of early infant practices in rural area of Jamnagar district. Int J Int Med Res. 2016:3(3):7-11

11. Asif Khan , Radha R. Breast feeding and weaning practices of mothers in a rural area- a cross sectional study. International Journal of Medical Science and Public Health, 2013, vol 2, issue 4.

12. Devang Raval, D. V. Jankar , M. P. Singh. A study of breast feeding practices among infants living in slums of Bhavnagar city, Gujarat, India. Healthline: ISSN 2229-337X Volume 2, Issue 2, July-December 2011.

13. District level household and Facility survey 2007-08 Gujarat.

14. Bhanderi D, Choudhary S.A community based study of feeding and weaning practices in under five children in semi urban community of Gujarat .National Journal of Community Medicine, vol 2 issue 2, July- September 2011.

15. A S Umar, M O Oche. Breast feeding and weaning practices in an urban slum, north western Nigeria. International Journal of Tropical Disease & Health 3(2): 114, 2013.