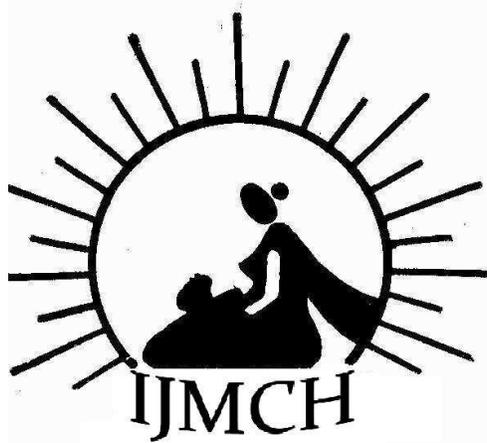


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To assess level of knowledge and various aspects of infant breast-feeding practices in urban ar rural Kanpur.

Breast Feeding Practices in Women from Urban and Rural Areas -A Comparative Study

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ABSTRACT

Research question: To assess level of knowledge and various aspects of infant breast-feeding practices in urban and rural Kanpur.

Methodology:

Study design: Cross-sectional study

Settings: Pediatrics' OPD, GSVM Medical College, Kanpur, India

Sample Unit: Mothers with babies' aged 1-2 years, attending the Pediatrics' OPD.

Sample size: 500 mothers from urban area, 500 mothers from rural area

Study tool: Pre-designed and pretested Performa, filled by the interviewer

Study period: January to September 2007

Results: Breast feeding initiation after birth was found to be early i.e. within 24 hr in urban area but reverse was found in rural area. Honey and Ghutti were preferred materials for first feed in urban and rural areas respectively. Breast feeding practices such as feeding in ideal posture and post feed burping were better prevalent in urban but demand feeding was better in rural areas. Most of the good breasts feeding practices were better followed in urban area except termination of breastfeeding where rural practices were better. All these deficits may be due to lack of knowledge and some old regional customs.

Conclusion: Best tool to promote breastfeeding is proper counseling of mother as well as father during antenatal visits and promotion of institutional deliveries.

Key words- *Breast milk, infant feeding practices, demand feeding, post feed burping.*

INTRODUCTION

Breast milk is an appropriate source of infant nutrition. Breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants and has a unique biological and emotional influence in the health of both mother and child.⁽¹⁾ Breast-feeding indirectly promotes improved maternal and child health by providing immunological protection and lengthening birth intervals. So promotion of breastfeeding is justified on firm scientific grounds. Decades have been spent debating over infant feeding choices and duration, both of which are interwoven with cultural norms, maternal and infant behavior, and nutritional and health status.

Infant mortality rates in developing countries are 5 to 10 times higher among children who have not been breast fed adequately.⁽²⁾ Baby friendly hospital initiative (BFHI) of UNICEF is considered as one of the most successful effort ever made to protect, promote and support breastfeeding, encouraging proper infant feeding practices starting at birth. Controversies and recommendations have abounded, and a consensus is yet to be arrived at.

This study was designed to assess various aspects of infant feeding practices in urban and rural areas of Kanpur and motivate the mothers to breast- feed their babies.

MATERIALS AND METHODS

In India, city of Kanpur has witnessed the industrialization, urbanization and immigration of rural population, which somewhat amalgamated the health practices in urban Kanpur. Hence it has provided an ideal setting to carry out comparative study among urban and rural breast-feeding practices.

The present study is a Cross-sectional study, which was designed to be carried out in Pediatrics' OPD, GSVM Medical College Kanpur. Period of this study was from January 2007 and stretched over to nine months duration. Total 1000 mothers with children in the age group of 1 to 2 year were selected. 500 mothers from rural Kanpur and comparative study universe from urban population attending Pediatrics OPD were selected based on their address on record.

The study tool adopted in this study was predesigned and pretested questionnaire. The objectives of study were:

- General infant breast-feeding practices.
- Knowledge and attitude regarding breast-feeding in urban and rural population.

Interview technique was adopted in the study. Attempts were made to interview these mothers when they were coming to attend Pediatrics OPD. Thus 100% coverage of total study universe was ensured. Mothers who had infants with specific problems (cleft lip/palate and primary lactose intolerance) were excluded. Verbal consent was taken from all the study subjects. The information and data thus obtained were compiled, tabulated and analyzed statistically to draw out observations and meaningful conclusions.

RESULTS

A total of 1000 women were recruited in to the study, the age range was between 15-40 years and mean age was 27.5 yrs, most of them (63.15%) belonged to 31-40 years of age group. There was not much difference in urban and rural findings regarding starting breastfeeding within 4 hrs after birth. Most of urban population has started breastfeeding with in 24 hrs but in the rural population it is mostly after 24 hrs (TABLE I).

TABLE-I TIME OF STARTING BREAST FEEDING AFTER DELIVERY

Time	Urban		Rural		Total	
	No	%	No	%	No	%
0– 4 hrs.	30	6.0	17	3.4	47	4.7
5 – 12 hrs.	85	17.0	33	6.6	118	11.8
13 – 24 hrs.	241	48.2	73	14.6	314	31.4
25 – 48 hrs.	62	12.4	205	41.0	267	26.7
49 – 71 hrs.	50	10.0	116	23.2	166	16.6
4 – 7 days	30	6.0	45	9.0	75	7.5
> 7 days	2	0.4	11	2.2	13	1.3
Total	500	100.0	500	100.0	1000	100.0

Most common substance used as first feed for new born in rural areas was Ghutti (81.2%) followed by honey whereas honey (53.2%) followed by breast milk in urban areas (TABLE II).

TABLE-II SUBSTANCE USED AS FIRST FEED

Substance used	Urban		Rural		Total	
	No.	%	No.	%	No.	%
Ghutti	46	9.2	406	81.2	452	45.2
Honey	266	53.2	31	6.2	297	29.7
Breast milk	91	18.2	23	4.6	114	11.4
Plain water	61	12.2	27	5.4	88	8.8
Artificial milk	30	6.0	6	1.2	36	3.6
Others	6	1.2	7	1.4	13	1.3
Total	500	100.0	500	100.0	1000	100.0

Demand feeding practice was better prevalent (38.8%) in rural areas in comparison to urban areas (26.2%) but ideal feeding posture and post feed burping practice were better prevalent in urban areas (TABLE III).

TABLE-III BREAST FEEDING PRACTICES

Practices	Urban		Rural		Total	
	No.	%	No.	%	No.	%
Ideal feeding posture	108	21.6	74	14.8	182	18.2
Demand feeding	131	26.2	194	38.8	325	32.5
Post feed burping	294	58.8	109	21.8	403	40.3
Total	500	100.0	500	100.0	1000	100.0

TABLE-IV MATERNAL KNOWLEDGE ABOUT OPTIMUM TOTAL DURATION OF BREAST FEEDING

Duration	Urban		Rural		Total
	No.	%	No.	%	
<6 months	7	1.4	10	2.0	17
6-12 months	129	25.8	20	4.0	149
12-18 months	181	36.2	38	7.6	219
18-24 months	173	34.6	183	36.6	356
As long as take	0	0.0	131	26.2	131
Till next pregnancy	0	0.0	90	18.0	90
Don't know	10	2.0	28	5.6	38
Total	500	100.0	500	100.0	1000

Regarding maternal knowledge about optimum total duration of breast feeding, 63.4% urban women thought that optimum duration is up to 18 months whereas in rural areas, only 13.6 % women supported this. 36.6% of rural women responded that optimal duration

was 18-24 months while another 26.2% said that breast feeding could be continued as long as the child took it. (TABLE IV)

Most common reason cited for premature termination of breastfeeding (at age of <6 months) was insufficient breast milk (69.2%) in urban areas whereas baby's illness (60.9%) in rural areas. (TABLE V)

Exclusive breastfeeding practice was influenced by father's various roles, all maternal factors and exposure to mass media. Experience of lactation related difficulties and being primiparous were negatively associated, whereas father's participation in decision making was positively associated with exclusive breast feeding. Interestingly, maternal exposure to various means of mass media communication was negatively associated with breastfeeding initiation within 30 minutes, but positively associated with exclusive breastfeeding. (TABLE VI)

**TABLE V: REASONS FOR PREMATURE TERMINATION OF BREAST FEEDING (<6MONTHS)
(Multiple response)**

Reasons	Urban (276)		Rural (128)		Total (404)	
	No.	%	No.	%	No.	%
Pregnancy	6	2.2	25	19.5	31	7.6
Insufficient breast milk	191	69.2	37	28.9	128	31.6
Maternal illness	56	20.3	19	14.8	65	16.1
Baby's illness	54	19.6	78	60.9	132	32.6
Psychological views	108	39.1	42	32.8	150	37.1
Others	74	26.8	18	14.1	92	22.8

DISCUSSION

There is an alarming trend that bottle-feeding is increasingly getting popular. Artificial feeding, early introduction of milk supplementation and early or late introduction of complementary foods, all contribute to the vicious cycle of infection, malnutrition and infection. Efforts should be made to increase women's confidence in their ability to breastfeed.⁽³⁾ All available studies indicate that the prevalence of breast-feeding in India is almost universal, both in rural and urban areas. In a study carried out by the Nutrition Foundation of India in three major States, namely Maharashtra, West Bengal and Tamil Nadu, 97 to 100 per cent of the infants were breast-fed.⁽⁴⁾ A major survey carried out by

TABLE-VI FACTORS ASSOCIATED WITH BREASTFEEDING PRACTICES (Odds Ratio)

Description of factor	<i>Timely initiation of breastfeeding</i>	<i>Exclusive breastfeeding</i>
<i>Father's roles:</i>		
Seeking information about breastfeeding and Infant feeding	1.538*	0.992
Participation in decision making of current Feeding mode	0.562	1.517*
Degree of involvement during ANC visits	0.478*	0.782
Involvement in a number of childcare Activities	0.840	0.716
<u>Maternal factors:</u>		
Mother being a housewife	0.617	2.125*
Maternal good knowledge about breastfeeding	0.626	1.437*
Maternal positive attitude towards breastfeeding	1.182	1.443*
Experience of at least 1 lactation related difficulties	0.594	0.174*
Being primiparous	0.709	0.435*
<u>Other influences:</u>		
Father's usual exposure to various means of mass media communication	1.287	0.512
Father's exposure to various means of interpersonal Communication during postpartum	0.542	0.931
Mother's exposure to various means of mass media communication	0.245*	3.185*
Mother's exposure to various means of interpersonal communication	1.598	0.621
Supportive practices from health facilities	51.776*	1.241

* *Significant factor, p<0.05*

Odds Ratio (OR) < 1 means negative association; OR > 1 means positive association

the Operations Research Group (ORG) in five States, namely Gujarat, Jammu and Kashmir, Uttar Pradesh, West Bengal and Tamil Nadu, also showed that breast-feeding in rural areas is universal.⁽⁵⁾ Similar observations have been made in other States as well. Thus, the prevalence of breast-feeding is still universal both in rural and urban India.

It is highly desirable that the infant should be put on breast feed as soon as possible after birth, preferably within four hours of birth. The unique nutritional and antibody properties of colostrum and the disadvantages to those infants not fed with colostrum are now well recognized and documented. Starting breast feeding within 4 hrs after birth was found very low in both urban and rural areas in our study and these findings are similar to the findings of Gupta RK *et al.*⁽⁶⁾ Similar findings have also been observed by Ram *et al.*⁽⁷⁾ whereas Kar *et al.*⁽⁸⁾ and Dutta banik⁽⁹⁾ have reported that 51.3% and 42.9% of infants respectively were put on breast milk within first 24 hrs after their birth.

The pre-lacteals given in the present study were mainly plain water, jaggery, water, honey with water, and sugar water etc. Pre-lacteal feeds interfere with mother's confidence and also with the sucking stimulation and prolactin production. It may also introduce infections and hence should be discouraged. Only 18.2% mothers in urban and 4.6% in rural area had fed colostrum to their children which was slightly higher than that reported by Parmar *et al.*⁽¹⁰⁾ who reported acceptance of colostrum to be 8.6%. The higher percentage of use of colostrum in urban areas in our study highlights the importance of social surroundings during perinatal period.

In the present study demand feeding was found to be 26.2% in urban and 38.8% in rural area which is lower than 84.1% as reported by Bandopadhyay S K *et al.*⁽¹¹⁾ in their study. Ideal feeding posture and post feed burping were better prevalent in urban areas and these findings are in match with finding of Arifeen S *et al.*⁽¹²⁾ This may be due to better educational status of mother and more exposure to health education in urban areas.

Generally, it is considered desirable for infants to be exclusively breastfed for at least the first six months after birth. As far as maternal knowledge regarding the optimum duration of breast feeding is concerned, our findings are slightly different than one study conducted in Pakistan which reported that 17.6% of mothers breast fed up to 5 months, 35.6% up to 1 year and 29.2% beyond 1 year and observed that duration of breast-feeding varied according to mother's educational level and longer duration was seen in women of rural areas.⁽¹³⁾

The reasons for early discontinuation of breast-feeding (below 6 months) in our study were in consonance of observations by Gajanan *et al.*⁽¹⁴⁾ who found that either baby's illness or maternal illness was the major reason for premature termination of breast feeding.

Information about what specific roles a father should provide to help initiate first breastfeeding contact immediately is not conclusive in the present study. Positive association was found only with paternal role in seeking information about infant feeding. Same story was with paternal role in exclusive breast feeding where only positive factor was participation in decision making of current feeding mode.

Our findings regarding paternal role in timely initiation of breastfeeding are supported by Schmidt and Sigman-Grant⁽¹⁵⁾ and Wolfberg *et al*⁽¹⁶⁾ who also found positive association between father interest in seeking information about breast feeding and timely initiation of breastfeeding.

Mother being housewife, her good knowledge and positive attitude towards breastfeeding were found supportive factor for exclusive breast feeding in our study. These finding are matching with Dearden *et al*⁽¹⁷⁾ and Falceto *et al*⁽¹⁸⁾ who found exclusive breast feeding practice were better prevalent in nonworking and well educated women. Interestingly, maternal exposures to various means of mass media communication was negatively associated with breastfeeding initiation within 30 minutes, but positively with exclusive breastfeeding at time of interview. There was more information addressing the importance of exclusive breastfeeding (i.e. exclusive breastfeeding practiced by more celebrities was seen as a profile of modern mothers) compared to information addressing timely breastfeeding initiation. Picasane *et al*⁽¹⁹⁾ and Februhartanty *et al*⁽²⁰⁾ supported this fact that influence of mass media to timely breastfeeding initiation may be disguised by influence from the health providers.

CONCLUSION

Lacunae in knowledge and deficiency in practice regarding breast-feeding is revealed in our study. Hence certain more steps are required to improve the status as:

1. Encouragement of breast feeding in connection with maternal and baby illness.
2. Counseling for psychological factors leading to premature termination of breastfeeding.
3. Creating awareness about usage of expressed breast milk.
4. Strengthen the codes on the marketing of artificial milk products.
5. Support working women to continue to breast-feed their infants in the workplace and in public places.

Such empowerment involves the removal of constraints and influences that manipulate perceptions and behavior towards breastfeeding, often by subtle and indirect means.

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