

A Study on Effect of Educational Level of Parents on Breast Feeding Practices in Urban and Rural Areas of Lucknow

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ABSTRACT

Background: It is well known that education level of father and mother is an important factor to achieve breastfeeding. But, according to some literature, there is still controversy that education of parents is really a major factor to affect breastfeeding practices. **Objective:** To find out relationship of educational level of parents with their breast feeding practices. **Methods:** A community based cross-sectional study was carried out in rural and urban areas of Lucknow. Multistage random sampling was used. A pre designed & pretested questionnaire was used and house to house survey was done. 528 infants with their mothers as respondent were interviewed and information about their educational level and breast feeding practices were collected. **Results:** Majority of mothers in rural areas were illiterate (58.3%) as compared to only 20.5% in urban areas. Majority of fathers were literate in both urban and rural areas. Lower educational status of mother and father were significantly negatively associated with initiation of breastfeeding within 1 hr, colostrum giving, exclusive breastfeeding. 36.7% mothers started breast feeding within one hour, while 83.0% mothers gave colostrum. Exclusive breast feeding was present in 65.6% mothers. Similar to breastfeeding initiation, a random but statistically significant difference in number of women who exclusively breastfed their infants was observed in different educational classes with maximum proportion for graduates and above (82.1%) and minimum proportion for those who were just literate or educated upto primary level. **Conclusion:** The study reveals that perceptions of breastfeeding are higher in educated parents than illiterate parents. To reach at an ever satisfactory level of breastfeeding practice, more attention and education need to be given amongst the general people.

Keywords: Breast feeding practices, parental education, Lucknow.

INTRODUCTION

The first year of new life is the most important and vulnerable period for child. Infant mortality has traditionally been viewed as an indicator of the social and economic well-being of a society. Breast-feeding has a unique biological and emotional influence on the health of both mother and infant (WHO/UNICEF, 1989).^[1] It is furthermore an important determinant of infant health in the prevention of malnutrition and infections.^[2,3]

Despite its advantages, however, breast-feeding is

declining in underdeveloped and developing countries as well.^[4] It is a paradox that breastfeeding is being increasingly neglected despite evidence from certain communities with high prevalence of malnutrition breast feeding showing substantially higher child survival upto 3 yrs of age.^[5] Delayed initiation of breastfeeding and inappropriate feeding practices in the newborn period and first year of life exacerbate under-nutrition in infants and children.^[6]

In India, breast feeding has been the traditional way of feeding the newborn. It lays foundation for their healthy psychosocial development. The environment also plays an important role in determining the maternal feeding and infant care practices while the urban environment gives an opportunity to a better information and communication system and a relatively better educational strata of mothers, thus disseminating the knowledge swiftly and efficiently the compulsions of urban lifestyle sometimes affect

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the feeding practices of urban mothers, on the other hand rural mothers are often less educated, have poverty, a poor information and communication system and compulsions of other type.^[7] Education level of father and mother is an important factor to achieve breastfeeding. But, according to some literature, there is still controversy that education of parents is really a major factor to affect breastfeeding practices. With this background, this cross sectional study was undertaken to evaluate the relationship between education of parents and breastfeeding practices in urban and rural areas of Lucknow.

MATERIALS AND METHODS

The present study was carried out in the urban and rural areas of Lucknow. Infants (children less than 1 yr of age) with their mothers as respondent. The period of study was one year from October 2012 to September 2013 which was used for the development of study tools, collection of data, analysis and presentation of findings. It was a community based cross-sectional study.

Sample Size

The basis for sample size collection was prevalence of exclusive breast feeding. In NFHS-3, UP, 2005-06 report, the prevalence of exclusive breast feeding in Uttar Pradesh has been reported to be 27.6%. In present study we also targeted this prevalence to be a representative proportion within a 95% confidence interval range. The sample size was calculated using the following formula:

$$n = (z\alpha)^2 \times p \times q / d^2$$

where n = sample size

z = Z static at α level of significance, at $\alpha=5\%$, its value is 1.96

p = prevalence = 27.6% (according to NFHS-3⁸, UP, 2005-06, exclusive breast feeding upto 4-5 months)

q = 100 – p = 72.4%

d = allowable error = 4%

$$\text{Sample size (n)} = 3.84 \times 27.6 \times 72.4 / 4 \times 4 \\ = 479.57 = 480$$

Taking 10% non-respondents, the proposed sample size was

$$= 480 + 48 = 528$$

Sampling Technique

A multi-staged random sampling technique was used to select required sample size.

First Stage

Firstly the sample size of 528 was divided equally into urban and rural areas.

Second Stage

Urban Areas

A list of total number of 110 wards were obtained. Out of these, 10 wards were selected randomly.

From each ward two mohallas were selected by simple random sampling. So that total 20 mohallas were selected from urban area.

Rural areas

In rural Lucknow, there are 8 blocks. Out of these 2 blocks (Kakori and Malihabad) were selected randomly. From each block 6 villages selected by simple random sampling.

Third stage

Simple random technique (using the last digit of currency) was used to select the first household for the survey. Then starting from the first household on the left side of the road all the houses, where an infant were available, were surveyed till the desired number of infants met from each of the 12 villages and 20 mohallas.

Inclusion Criteria

1. Infants (Children aged <1 year).
2. Infants residing for at least six months in the area.
3. Infants whose native place was other than present place of residence, but the duration of stay was more than six months.

Exclusion Criteria

1. Infants living in the area for less than six months.
2. Infants whose mother were not available or non cooperative or refused to provide the necessary information.

Data Collection:

Door to door survey was done for the collection of necessary information.

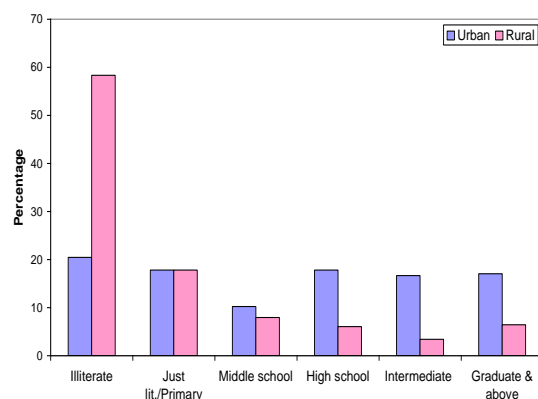
Interview schedule

A structured pretested preformed interview schedule was used to record the information.

Statistical Analysis

Data was tabulated on Microsoft Excel Sheet and checked for any inconsistency. The master chart was prepared for data analysis and tables were formed accordingly. Chi-square test was used to make categorical comparisons. The p-value <0.05 was considered as significant. All the analysis was carried out by using SPSS 17.0 version.

RESULTS



Maternal Education

Table 1: Distribution of Infants according to Educational level of parents

Educational status	Mother						Father					
	Urban (n=264)		Rural (n=264)		Total (n=528)		Urban (n=264)		Rural (n=264)		Total (n=528)	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Education												
Illiterate	54	20.5	154	58.3	208	39.4	22	8.3	58	22.0	80	15.2
Just literate/Primary	47	17.8	47	17.8	94	17.8	66	25.0	117	44.3	183	34.7
Middle school	27	10.2	21	8.0	48	9.1	36	13.6	30	11.4	66	12.5
High school	47	17.8	16	6.1	63	11.9	71	26.9	32	12.1	103	19.5
Intermediate	44	16.7	9	3.4	53	10.0	29	11.0	10	3.8	39	7.4
Graduate & above	45	17.0	17	6.4	62	11.7	40	15.2	17	6.4	57	10.8

Table 2: Distribution of infants according to Breast Feeding Practices

SN	Practices	Urban (n=264)		Rural (n=264)		Total (n=528)		Significance of difference	
		No.	%	No.	%	No.	%	χ^2	P
1.	Initiation of Breast Feeding								
	Within one hour	115	43.6	79	29.9	194	36.7	13.581	0.001
	After one hour	86	32.6	89	33.7	175	33.1		
After one day	63	23.9	96	36.4	159	30.1			
2.	Colostrum Given								
	Yes	225	85.2	209	79.2	434	82.2	3.313	0.069
No	39	14.8	55	20.8	94	17.8			
3.	Exclusive breast feeding*	n=138		n=143		n=281			
	Yes	98	71.0	89	62.2	187	66.5	2.430	0.119
No	40	29.0	54	37.8	94	33.5			

Table 3: Association of Breast feeding practices with educational level of parents

SN	Educational level	Total No. (N=528)	Breastfeeding initiated within 1 hr (n=194)		Colostrum given (n=434)		Total No. (N=281)	Exclusive breast feeding*	
			No.	%	No.	%		No.	%
1.	Mother's Education								
	Illiterate	208	90	43.3	173	83.2	102	76	74.5
	Literate/primary	94	33	35.1	79	84.0	44	23	52.3
	Middle school	48	10	20.8	38	79.2	23	14	60.9
	High school	63	27	42.9	46	73.0	34	19	55.9
	Intermediate	53	15	28.3	42	79.2	39	23	59.0
	Graduate & above	62	19	30.6	56	90.3	39	32	82.1
	Statistical significance		$\chi^2=12.777$; p=0.026		$\chi^2=7.397$; p=0.193		$\chi^2=14.218$; p=0.014		
2.	Father's Education								
	Illiterate	80	33	41.3	69	86.3	3	0	0.0
	Literate/primary	183	62	33.9	139	76.0	50	41	82.0
	Middle school	66	22	33.3	48	72.7	3	0	0.0
	High school	103	36	35.0	88	85.4	84	49	58.3
	Intermediate	39	23	59.0	33	84.6	128	84	65.6
	Graduate & above	57	18	31.6	57	100.0	2	2	100.0
	Statistical significance		$\chi^2=10.764$; p=0.056		$\chi^2=23.053$; p<0.001		$\chi^2=26.429$; p<0.001		

[Table 1] shows that in rural area maximum mothers were illiterate or just literate/educated upto primary level (76.1%) in urban area they were educated upto High school or above (51.5%). In urban area 17% of mothers were educated upto graduation and above as compared to only 6.4% in rural. With respect to father's education maximum were illiterate or just literate/educated upto primary level (66.3%) in rural area while in urban area they were educated upto High school or above (53.1%).

[Table 2] shows that initiation of breastfeeding within one hour of birth was significantly higher in urban area 115(43.6%) as compared to rural area 79(29.9%) ($p=0.001$). Those who delayed breastfeeding for >1 day, urban mothers 55(87.3%) did it owing to sickness of mother as compared to

the rural mothers 68 (70.8%). Exclusive breastfeeding was practiced by urban 98 (71.0%) as compared to rural 89(62.2%) areas, however the difference between two areas was not significant statistically ($p=0.119$). Urban mothers gave the feed for an average duration of >20 minutes was higher 99(40.2%) as compared to rural mothers 73 (29.2%) and the difference was significant statistically too ($p<0.001$). All the urban mothers 246 (100%) used to feed their children on demand as compared to 227(93.0%) of rural mothers, thus showing a significant difference between two areas ($p<0.001$).

[Table 3] shows that mothers who initiated breastfeeding within 1 hr were educated upto middle school (20.8%) while this number was maximum for illiterates (43.3%). Although a statistically

significant difference was observed yet it was random in nature and did not follow a linear trend. Majority of mothers irrespective of their educational status gave colostrum to their infants, showing no significant difference statistically ($p=0.193$). Similar to breastfeeding initiation, a random but statistically significant difference in number of women who exclusively breastfed their infants was observed in different educational classes with maximum proportion for graduates and above (82.1%) and minimum proportion for those who were just literate or educated upto primary level.

DISCUSSION

With respect to education of parents, majority of mothers in urban area were literate (79.5%) while majority of rural mothers were illiterate (58.3%). This is despite the fact that Lucknow boasts of a high literacy rate. However, when we compare the findings with that of the literacy status of fathers in urban and rural areas, we can see that the differences between two areas are of lower order. In Urban areas, 8.3% and in rural areas 22% fathers were illiterate. Thus showing that a wide gap between males and females exists for both the areas. The findings indicate the need of a mass scale literacy campaign especially targeted towards girls to remove this disparity.

In present study, with respect to breast feeding practices, initiation of breast feeding within first hour of birth was significantly lower in rural areas (29.9%) as compared to urban areas (43.6%) ($p=0.001$). Overall the rate of initiation of breast feeding within first hour of birth was 36.6%. Pratibha et al. (2010)⁹ found a similar rate (36.6%) of initiation of breastfeeding within 1 hr among urban slums of Lucknow city.

In present study, total 82.2% infants received colostrum thus showing no significant urban-rural differences. A study by Banapurmath et al¹⁰ reported colostrums feeding rate of 71.4% almost similar to the present study. Major reason for deprivation of colostrum to the infants are beliefs. Overall out of 94 children deprived of colostrum, 86 (91.5%) were deprived of colostrum owing to belief. In a study by Subbulakshmi et al. (1990),¹¹ significantly higher proportion of rural mothers as compared to urban mothers offered colostrum to their babies. However, in a recent assessment by Raina et al. (2013),¹² the differences in colostrum feeding practices did not vary significantly between rural and urban areas, however, the proportion of those receiving it was much lower in their study (23.7%) as compared to our study (82.2%). The reason for this could be increased institutional deliveries in present study. In these institutions, advising the mother to provide colostrum to their children is a routinely followed practice.

In another study, Chakrabarty (2007),¹³ also reported lower education to be significantly associated with early termination of exclusive breastfeed. In present study too, rural women had lower educational attainment as compared to urban women and hence it might also contribute for these differences. In present study, exclusive breast feeding till 6 months after birth was found (71%) in urban area as compared to rural area (62.2%), however, the difference between two areas was not significant statistically ($p=0.119$). The findings in present study are in accordance with the results obtained by Oomen et al. (2009),¹⁴ conducted at AIIMS, New Delhi. Oomen et al. in their study found that maximum number of exclusive breastfeeding in either rural or urban areas of their study was 57% and average number upto 6 months 18.2% which is much lower than the 66.5% mothers in present study.

In present study, maternal education was also found to be significantly associated with initiation of breastfeeding within 1 hour. On the other hand, Chudasama et al. (2009),¹⁵ explored but did not find a significant association between maternal education and initiation of breastfeeding. Rate of initiation of breastfeeding within 1 hr was found to be significantly higher among working women (15/21; 71.4%) as compared to non-working women (179/507; 35.3%). In a study by Shroff et al. (2011),¹⁶ maternal autonomy was found to influence the feeding practices and infant growth positively and working status of mother can be equated as an indicator of increasing financial autonomy of the mothers.

In present study, although father's education did not show a significant association with initiation of breast feeding within 1 hr yet father's occupational status showed a significant association with this practice. The findings suggested that with increasing occupational levels there was lower prevalence of initiation of breast feeding within 1 hr, thereby indicating some financial aspect to be principal reason for this anomaly.

In present study, the practice of giving colostrum was unaffected by mother's education, which might be due to a high prevalence of colostrum use (~82%). However, with respect to maternal occupation, the differences were quite clear with all the working women giving colostrum to their infants. Father's literacy as well as higher occupational categories were also seen to be positively and significantly associated with colostrum feeding. All these findings together indicate that education, awareness and socioeconomic upgradation positively influences the colostrum feeding. These findings in essence support the views of Shroff et al. (2011),¹⁶ who were of the view that maternal autonomy positively influences the feeding practices. In fact, economic and financial autonomy seem to positively

influence the feeding practices as far as colostrum feeding was concerned.

With respect to exclusive breastfeeding the rates were found to be different among different educational strata of mothers. On exploring further into illiterate and literate we found that the rates were 74.5% (76/102) for illiterates and 111/179 (62.0%) among literates ($p=0.033$). Working mothers were found to be positively associated with exclusive breastfeeding with all the working mothers (10/10; 100%) reporting to follow exclusive breast feeding as compared to 65.3% of housewives. This could again be attributed to higher level of exposure of these women to means of communication and awareness. Association with father's education showed a significant negative association with rate of breastfeeding, thus indicating that breastfeeding is mainly affected by maternal characteristics and that fathers have little role in influencing the breast feeding practices especially those focussed by us in present study.

CONCLUSION

Lower education of mother and father, non-working status of mother and skilled labour occupation of father were significantly negatively associated with exclusive breastfeeding. In present study, we found that initiation of breastfeeding within 1 hr of birth and exclusive feeding was not done by majority of mothers in both rural and urban areas, thus indicating the need to focus on creating awareness regarding appropriate time for initiation of breastfeeding and its continuation.

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