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Research Paper

Infant feeding practices in eastern Uttar Pradesh

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■ **ABSTRACT :** The practices of breast feeding and weaning prevailing in the community play a crucial role in deciding the health of a child. The present community based cross sectional study was conducted to study the prevailing practices of infant feeding. Being a traditional with low literacy level community, the comparison of prevailing practices according to the religion, caste and education was made to target the group with Information, Education and Communication (IEC) activity to bring out favourable practices for proper growth and development of the children. The finding suggested that 6-12 months was the usual practice of breast feeding and caste and education of mothers were not associated with it. Time of imitating top feed was 5 months in majority and cow milk was the most preferred one by more than 80 per cent mothers; statistical significance was seen by caste but not with the education. Time of initiation of semi solid was also 5 months in majority and caste was seen to be statistically associated. Rice and dal were the commonly practiced in semi solid. Education of mother was seen to be in practice of commercial food like cerelac also.

■ **KEY WORDS :** Breast feeding, Top feeding

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Breastfeeding and weaning practices are crucial for optimal growth and development during infancy. Exclusive breastfeeding for first six months is stated as a global public health recommendation. Continuous vigilance over infant feeding practices in community is necessary for timely interventions to ensure optimal growth and development. Despite the importance of breastfeeding (BF), there are surprisingly very few studies on this subject in India. Initiation of BF is generally quite late and colostrum is discarded. Moreover, pre-lactation feeding is generally unhygienic. Although BF is universal, certain population segments, such as educated, the duration of BF is becoming shorter. It is recommended that the infant start to breastfeed preferably within 6 hours of birth. Generally, newborn Indians are breastfed for the 1st time 48 to 72 hours after birth. Often the mode of feeding is not hygienic. It is generally good for babies to be exclusively breastfed for 4 months after birth. In India, women breastfeed exclusively for up to 8 months and in some cases for 12 months too. This delay is a major cause of infant malnutrition. When Indian children are very young (0-3 months) they are usually fed on demand[1] Eastern Uttar Pradesh is constituted by more traditional community and literacy level of women is very low. Although, in traditional community breast feeding practice was for the longer duration but initiation and use of colostrums was poor. The caste and education a mixed component of community is still need to be studied for infant feeding practices. In view, this study was undertaken, a part of the research work, with the objective:

To assess variation in infant feeding practices according to the religion, caste and education of the mother.

■ RESEARCH METHODS

This is a cross sectional study carried in one of the Block of Varanasi District. Out of 8 Blocks one block was selected at random and from the list of villages of selected block 10 villages were again selected at random. The list of mothers of selected villages was then finally prepared. In total there were 1623 mothers who had at least one child of less than five years. From the list of mothers 276 mothers were randomly selected to assess the infant feeding practices in addition to the general information of their own and family.

The data was analysed thorough SPSS Version 16.0. For the comparative study according to the caste the 6 mothers were merged into OBC class. The tables were presented in per cent and χ^2 test was used to assess the association of caste and education on feeding practices.

■ RESEARCH FINDINGS AND DISCUSSION

In total 276 surveyed family there were 402 children of age less than five years with sex ratio 770 females per 1000 males. Survival rate of born was as high as 97 per cent the per capita income (PCI) was very low of the community as 50 per cent were below PCI Rs. 274 per month.

Table 1 : Main characteristics of the surveyed family

Total family surveyed	276
Total children	402
Average children below 5 years per family	1.46
Sex ratio of children below 5 years	
Average per capita income	Rs. 472 ± 612
Median per capita income	Rs. 274
Total children born	3.2 ± 1.8
Total children alive	3.1 ± 1.7
Survival rate of children per 100 born	97

Among the mothers preponderance (82.8%) of Hindu community was found, only 17.2 per cent were Muslims. General caste representation was very few (2.2%) while majority were of OBC class (71.9%). SC class was also less than 10 per cent (8.8%). Literacy status of mothers was very poor as reflected from the Table 2. Half of the mothers were illiterate and 12.8 per cent had education up to 7th class. Education above 12 classes was of 12.6 per cent mothers.

Table 2: Background characteristics of the surveyed family

Characteristics	No. (276)	Per cent
Religion		
Hindu	228	82.8
Muslim	48	17.2
Caste		
General	6	2.2
OBC	198	71.9
SC	24	8.8
Muslim	48	17.2
Education of the mother		
Illiterate	137	50.0
1-7	36	12.8
8-12	63	22.6
12 and above	40	14.6
Occupation of the mother		
HW	270	97.8
HW+some work	6	2.2

Majority of the mothers (around 60%) breast feed their children between 6 to 12 months irrespective of their caste. Nearly 20 per cent were also found to continue breast feeding more than a year irrespective of caste. Caste did not show association with the duration of breast feeding ($\chi^2 = 3.02$; df = 4; p = 0.554). Duration of breast feeding between 6-12 months was seemed to be higher in mother with education more than 12 (71.4%) compared to other educational categories (Table 4) but no statistical association was seen $\chi^2 = 3.59$; df = 6; p = 0.731) (Table 3 and 4).

Table 3 : Distribution of mothers as per duration of breast feeding according to their caste

Duration of breast feeding (Months)	Caste			Total (n=276)
	OBC (n=193)	SC (n=24)	Muslims (n=47)	
Below 6	24.4	16.7	14.9	22.0
6-12	59.1	62.5	61.7	59.8
12 or more	16.6	20.8	23.4	18.2
	$\chi^2 = 3.02$; df = 4; p = 0.554			

Table 4 : Distribution of mother's as per duration of breast feeding according to their education

Duration of breast feeding (Months)	Education				Total (n=276)
	Illiterate (n=130)	1-7 yrs (n=34)	8-12yrs (n=62)	12 and above (n=35)	
Below 6	21.1	29.4	22.6	17.1	22.0
6-12	58.6	52.9	59.7	71.4	59.8
12 or more	20.3	17.6	17.7	11.4	18.2
	$\chi^2 = 3.59$; df = 6; p = 0.731				

Table 5 indicates that overall more than 60 per cent mothers initiate top feeding at 5th month. Initiation top feeding at 5th month was lesser in Sc caste compared to OBC and Muslims. Significantly more mothers of SC (50.0%) were initiating top feeding at 6th month compared to 29.5 per cent of OBC and 14.3 per cent of Muslims (.$\chi^2 = 9.92$; df = 4; p = 0.042). The study conducted by Dinesh *et al.* reported that top feeding was initiated in 70 (23.3%) children with in first 1-4 months of their life whereas 230 (76.7%)

Table 5 : Distribution of mothers as per time of initiation of top feeding according to their caste

Time of initiation of top feeding (Months)	Caste			Total (n=276)
	OBC (n=193)	SC (n=24)	Muslims (n=47)	
4	9.3	4.2	10.6	9.1
5	61.1	46.3	74.5	62.1
6	29.5	50.0	14.3	28.8
	$\chi^2 = 9.92$; df = 4; p = 0.042			

children were not given any top feeding[2]. Kumar *et al.* (1992) found that in 33 per cent of urban poor children, top feeding was introduced within first three months of life[3].

Table 6 indicates that education did not so any variation of time of imitation of top feeding (χ^2 = 9.06; df = 6; p = 0.170), though initiation at 6th month was comparatively in more mothers who were illiterate or 1-7 yrs of schooling or more than 12 years of schooling.

Table 6 : Distribution of mothers as per time of initiation of top feeding according to their education

Time of initiation of top feeding (Months)	Education				Total (n=276)
	Illiterate (n=130)	1-7 yrs (n=34)	8-12yrs (n=62)	12 and above (n=35)	
4	7.5	17.6	8.1	8.6	9.1
5	59.4	55.9	74.2	57.1	62.1
6	33.1	26.5	17.7	34.3	28.8
χ^2 = 9.06; df = 6; p = 0.170					

Table 7 and 8 indicates the type of top feed given according to the caste and education of the mother. Cow milk was the first priority and about 85 per cent mothers practice it as top feeding. No association with caste and education was seen with the type of top feed in practice. Grover *et al.* (1997) has also reported that about 80 per cent mothers were giving cow milk as the top feed to their children[4]

Table 7 : Distribution of mother's as per type of top feeding according to their caste

Type of top feeding	Caste			Total (n=276)
	OBC (n=193)	SC (n=24)	Muslims (n=47)	
Cow milk	85.0	83.3	83.0	84.5
Buffalo milk with water	5.2	4.2	12.8	6.4
Goat milk	9.8	12.5	4.3	9.1
χ^2 = 5.25; df = 4; p = 0.263				

Table 8 : Distribution of mother's as per type of top feeding according to their education

Type of top feeding	Education				Total (n=276)
	Illiterate (n=130)	1-7 yrs (n=34)	8-12 yrs (n=62)	12 and above (n=35)	
Cow milk	85.7	82.4	87.1	77.1	84.5
Buffalo milk with water	5.3	11.8	4.8	8.6	6.4
Goat milk	9.0	5.9	8.1	14.3	9.1
χ^2 = 4.09; df = 6; p = 0.665					

Table 9 is indicating the time of initiating semi solid according to the caste of the mother. Overall 71.2 per cent mothers used to give semi solid at 5 months while rest at six month. Initiating semisolid at six month was significantly much higher (50% in mothers of SC compared to 29.5% of OBC and 14.9% of Muslims χ^2 = 9.75; df = 2; p = 0.008). Table 10 is indicating the time of initiating semi solid according to the education of the mother. that did not show any association on timOe of initiating semi solid (χ^2 = 5.49; df = 3; p = 0.139)

Table 9 : Distribution of mothers as per time of initiation of semi solid according to their caste

Time of initiation of semi solid (Months)	Caste			Total (n=276)
	OBC (n=193)	SC (n=24)	Muslims (n=47)	
5	70.5	50.0	85.1	71.2
6	29.5	50.0	14.9	28.8
χ^2 = 9.75; df = 2; p = 0.008				

Table 10 : Distribution of mothers as per time of initiation of semi solid according to their education

Time of initiation of semi solid (Months)	Education				Total (n=276)
	Illiterate (n=130)	1-7 yrs (n=34)	8-12 yrs (n=62)	12 and above (n=35)	
5	66.9	73.5	82.3	85.7	71.2
6	33.1	26.5	17.7	34.3	28.3
χ^2 = 5.49; df = 3; p = 0.139					

Table 11 is indicating the usual practice of semi solid given to their children by the caste of mother. Rice and dal was the usual practice semi solid by 83.3 mothers, while 12.5 per cent were giving mad and rice. Very few 4.3 per cent were also giving commercial food like cerelac. The semi solid food type was not found to be associated with caste of the mother (χ^2 = 4.24; df = 2; p = 0.375). Table 12

Table 11: Distribution of mothers as per the type of semi solid given according to their caste

Type of semi solid (Months)	Caste			Total (n=276)
	OBC (n=193)	SC (n=24)	Muslims (n=47)	
Rice and dal	81.9	87.5	87.2	83.3
Mad and rice	12.4	12.5	12.8	12.5
Rice + dal + cerelac	5.7	0.0	0.0	4.2
χ^2 = 4.24; df = 2; p = 0.375				

To calculate chi square 0 frequency cell merged

Table 12: Distribution of mothers as per the type of semi solid given according to their education

Type of semi solid (Months)	Education				Total (n=276)
	Illiterate (n=130)	1-7 yrs (n=34)	8-12 yrs (n=62)	12 and above (n=35)	
Rice and dal	87.2	88.2	80.6	68.6	83.3
Mad and rice	12.8	11.8	12.9	11.4	12.5
Rice + dal + cerelac	0.0	0.0	6.5	20.0	4.2
χ^2 = 30.17; df = 3; p = 0.000					

To calculate chi square 0 frequency cell merged

is indicating the usual practice of semi solid given to their children by the education of mother. Significantly more mother with comparatively higher level of education was also adding commercial food (cerelac) in addition to rice and dal (.χ^2 = 30.17; df = 3; p = 0.000).

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