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## Predictors and Barriers of Exclusive Breastfeeding: A Community Based Study in Some Rural and Urban Areas of Aligarh

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### ABSTRACT

"Breastfeeding is the first vaccination of a child". Exclusive breastfeeding for the first six months of age is a proven boon to mother and the child. There are multiple reasons for not following these feeding norms and they should be addresses appropriately. There are many hidden challenges which are unanswered such as absence of any action plan for promotion of breast feeding rates at local, state or regional level. This community based cross-sectional, descriptive study was conducted in the field practice areas of the Rural and Urban health training centres of the Department of Community Medicine, Jawaharlal Nehru Medical College, Aligarh Muslim University, Aligarh. A sample of 700 children under two years of age was chosen for the study. It was observed that only 8.9% of the children had been or were being exclusively breastfed. A fall in exclusive breastfeeding rate was observed as the age of the child increased from 0 to 6 months .Insufficient milk was the most common reason about not exclusively breastfeeding their children. Exclusive breastfeeding had a positive relation with education and age of the mother (20-30 years) and a child of male sex, but no significant differences were found with respect to the religion of the child. The study shows that the feeding practices followed in the community are still influenced by the traditions, beliefs and old cultural practices. More stress should be laid on a continuous IEC and BCC activities. Keywords: Barriers, Feeding Practices, Insufficient Milk,

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#### INTRODUCTION

Observational studies show that exclusive breastfeeding in the early months, continued partial breastfeeding and timely transition to high quality non breast milk foods deliver physiological and economic benefits to mothers and maximize nutrient intakes, growth, development and survival for normal healthy children. (Zoysa et al, 1991. Cunningham et al, 1980. Newman et al, 1995. Report on the World Nutrition Situation)<sup>1,2,3</sup>.

In India, although initiation of breast-feeding is still almost universal, particularly in rural areas, there are indications that in certain segments of the population, the duration of exclusive or almost exclusive breast-feeding is declining. Unfortunately, this trend is trickling down in some disadvantaged urban segments of the population such as slum dwellers (Khan and Prasad, 1984)<sup>4</sup>. Mothers start breastfeeding but gradually give up due to many reasons, which may be economic, cultural or social (Gupta and Gupta, 2003)<sup>5.</sup> 2000 United Nations).

There are many hidden challenges which are unanswered such as absence of any action plan for promotion of breast feeding rates at local, state or regional level. We need to do in depth studies at the local level, as we have very little data of these local areas. So these studies will provide a major contribution in formulation of district level plans for the betterment of the children of these areas. More over the cultural practices of different regions are different, so by doing such studies we can formulate the local level plans at the grass root level. For only after knowing the reasons of faulty feeding practices of children in our set up can we improve them. Hence the present study was conducted with the following objectives.

- 1. To determine the breastfeeding pattern of children in the first six months of life.
- 2. To find the barriers and socioeconomic correlates of breastfeeding.

#### MATERIALS AND METHOD

This community based cross-sectional, descriptive study was conducted in the field practice areas of the Rural and Urban health training centres of the Department of Community Medicine, Jawaharlal Nehru Medical College, Aligarh Muslim University, Aligarh. The sampling was done taking the prevalence of exclusive breastfeeding in Uttar Pradesh to be 45.5 percent (Gupta & Gupta, 2003)<sup>5</sup>. The sample size came out to be 620, and after allowing 10% for the non responders, the sample size was,  $620+62=682\sim700$ .

A list of all the registered children up to two years of age was obtained from the Rural and Urban health training centres of the D/o Community medicine. J.N.M.C, A.M.U. There were a total of 1200 children up to two years of age.

Social class was assessed using modified Kuppuswamy classification.

The required number of study population was obtained by applying the simple random number table for each village/area. Then every identified household was visited and the

primary/secondary respondents were interviewed for the study. The primary respondent in the visited family was the mother and if she was not available due to any cause, the secondary respondent was the next closest adult relative of the child.

The following definitions were used in the study:

<u>Breastfeeding</u>: The child has received breast milk direct from the breast or expressed (WHO, 1991).

<u>Exclusive breastfeeding</u>: The infant has received only breast milk from the mother or a wet nurse, or expressed breast milk, and no other liquids or solids with the exception of drops or syrups consisting of vitamins, mineral supplements, or medicines (WHO, 1991).

<u>Predominant breastfeeding</u>: The infant's predominant source of nourishment has been breast milk. However, the infant may also have received water and water-based drinks (sweetened and flavored water, teas, infusions, etc.), fruit juice; oral rehydration salts solution (ORS), drop and syrup forms of vitamins, minerals and medicines, and ritual fluids (in limited quantities). With the exception of fruit juice and sugar water, no food-based fluid is allowed under this definition (WHO, 1991).

<u>Predominant top feeding:</u> The infant's predominant source of nourishment has been top milk (WHO, 1991).

Mostly top fed: The infant's predominant source of nourishment has been top milk.

Only top fed: The child has never received any breast milk but only top feed.

The main drawback of the study is memory or recall bias. The mother when asked about the birth history and feeding pattern of the children during the first six months of life may have forgotten the events. The data was analyzed using SPSS software.

Maps of the study area



Figure 1: Exclusive Breastfeeding and age of the child RESULTS AND DISCUSSION

The present study was carried out in the field study areas of the rural and urban health training centres of the Department of Community Medicine, J.N.M.C. Aligarh Muslim

University. Aligarh. A total of 700 children were included in the study, which formed the study population.

Type of feeding practice	No.	%
Exclusively Breastfed	62	8.9
Predominantly Breastfed	480	68.6
Predominantly Top fed	92	13.1
Only top fed	66	9.4
Total	700	100

 Table I: Breast feeding pattern during the first six months of life.

It was observed that only 8.9% of the children had been or were being exclusively breastfed, 68.5% were predominantly breastfed, 9.4% were only top fed and 13.1% were predominantly top fed.

These findings collaborate with the findings of Philips et al, 2003<sup>15</sup> and Sethi et al, 2003<sup>14</sup>. In a study on Etiological Factors of Malnutrition among Infants in two Urban Slums of Delhi, A Nationwide survey found that only 20% of mothers practiced exclusive breastfeeding at 4 months of age Gupta and Gupta, 1992. Gupta and Gupta, 2003 in a study on the status of infant and young child feeding in 49 districts of India, reported that more than half of the children (54%) in the age group of 0-3 months were exclusively breastfeed whereas this percentage is much lower (26%) for children in the age group of 4-6 months.

The rate of predominant breastfeeding in our study group was maximum i.e. 68.5% and this finding is also supported by the mentioned author who reports that, 43 percent of the mothers gave other foods and water along with breastfeeding to the children aged 4-6 months and for children aged 0-3 months who were not exclusively breastfed, 15% of mothers gave water along with breast milk.

The line diagram (figure 1) shows a linear trend in the fall in exclusive breastfeeding rate as the age of the child increases from 0-6 months. This finding is supported by a number of other studies (Bavdekar, 1994, NFHS-2, 1998-99, Gupta and Gupta, 2003 and Chhabra et al, 1998. Medhi and Mahanta, 2004)<sup>5-9</sup> has reported in his study on breastfeeding, weaning practices and nutritional status of infants of tea garden workers of Assam, that exclusive breastfeeding rate was 81.25%, 68.42% and 62.96% at 0-1, 2-3 and 4-6 months respectively.

Table	II:	Distribution	of	children	according	to	the	reasons	of	not	exclusively
breast	feedi	ing (n=638)									

Reasons	Rural	%	Urban		%	Tota	l %
Insufficient milk	219	67.8	183	58.1		402	63.0
Maternal illness	6	1.9	35	11.1		41	6.4
Working Mother	7	2.2	35	11.1		42	6.6
Not accepted by the baby	5	1.5	8	2.5		13	2.03
Advised by others	79	24.4	48	15.2		127	19.9

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Drugs	7	2.2	6	1.9	13	2.0
Total (% within the row)	323	50.6	315	49.4	638	100
Chi square =323.45, df=6,	p<0.05	, Significan	it.			

As only 62 children were exclusively breastfed the above table describes the remaining 638 children. The most common reasons given by the maximum number of respondents about not exclusively breastfeeding their children was that they felt that their milk secretion was insufficient; both in rural (67.8%) and urban (58.1%) areas. the second most common reason was that they were advised by others for giving other things apart from breast milk.

Many studies are there which agree with our findings, Mallikarjuna et al, 2002<sup>10</sup> in his study on 224 villages of Chitradurg district found that "Not enough milk" was responsible for starting top feeds in 53.6% cases and the second reason was other illnesses. In a study done at LTMG hospital Sion, Bombay, Nanawati, 1994 found that 73.6% mothers who had started supplementary feeds before six months stated the commonest reason for doing so was their own assessment of inadequate milk.

Kulkarni et al, 2004<sup>11</sup> found the reason for the discontinuation of breastfeeding before six months were mainly illness of the mother while insufficient milk was the reason given by the mother who discontinued it between 7-12 months. In a study performed in Estonia the reason given by 25% of the study population for not able to exclusively breastfeed was "not enough milk" (WHO report, 2001). In a study by Omondi et al, 1990<sup>12</sup> on the determinants for breastfeeding and bottle-feeding in Botswana, it was found that the reason for stopping breastfeeding in young mothers was found to be insufficient milk.

Biosocial Exclus- Predo-		Predo-		Only top		Total				
Characters	ively		minan	minantly		minantly		fed		
	Brea	astfed	Breast	fed	Top fe	ed				
A.Education of	No.	%	No.	%	No.	%	No.	%	No.	%
mother	3	4.8	413	86.0	62	67.4	50	75.8	528	75.4
Illiterate	2	3.2	10	2.1	5	5.4	2	3.0	19	2.7
Just literate	10	1.6	15	3.1	7	7.6	6	9.1	38	5.4
Primary	25	40.3	13	2.7	6	6.5	2	3.0	46	6.6
Middle	17	27.4	11	2.3	5	5.4	2	3.0	35	5.0
High school	2	3.2	18	3.8	6	6.5	3	4.6	29	4.1
Inter	3	4.8	-	-	1	1.2	1	1.5	5	0.7
Graduate										
TOTAL	62	8.9	480	68.6	92	13.1	66	9.4	700	100
Chi square =282.52,	df=18	8, p<0.0	05, Signi	ificant.						
B.Social class										
Ι	-	-	1	0.2	1	1.1	-	-	2	0.3
II	18	29.0	56	11.7	11	1.02	19	28.8	104	14.9
III	20	32.3	252	52.5	60	65.2	18	27.3	350	50.0
IV	19	30.6	139	28.9	12	13.0	20	30.3	190	27.1
V	5	8.1	32	6.7	8	8.7	9	13.6	54	7.7

Table III: The breastfeeding pattern and the biosocial characters

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TOTAL	62	8.9	480	68.6	92	13.1	66	9.4	700	100	
Chi square =50.58, df=12, p<0.05, Significant.											
C.Religion											
Hinduism	43	9.4	310	67.7	55	12.0	50	10.9	458	65.4	
Islam	19	7.9	170	70.3	37	15.3	16	10.3	242	34.5	
TOTAL	62	8.9	480	68.6	92	13.1	66	9.4	700	100	
Chi square =4.98, df	=3, p>	>0.05, l	Insignifi	cant.							
D. Sex											
Male	34	54.8	280	58.3	36	39.1	15	22.7	365	52.1	
Female	28	45.2	200	41.7	56	60.9	51	77.3	335	47.9	
TOTAL	62	8.9	<b>480</b>	68.6	92	13.1	66	9.4	700	100	
Chi square =36.68, d	lf=3, p	0.05,	Signific	cant.							
EAge of the											
mother	5	8.1	7	1.5	9	9.7	9	13.6	30	4.3	
15-20 years	16	25.8	123	25.6	15	16.3	8	12.1	162	23.1	
21-25 years	20	32.2	130	27.1	20	21.7	16	24.2	186	26.6	
26-30 years	11	17.7	167	34.8	10	10.9	10	15.3	198	28.3	
31-35 years	5	8.1	47	9.8	33	35.9	15	22.7	100	14.3	
36-40 years	5	8.1	6	1.2	5	5.5	8	12.1	24	3.4	
>40 years											
TOTAL	62	8.9	480	68.6	92	13.1	66	9.4	700	100	
Chi square =130.93, df=15, p<0.05, Significant.											

It was observed that in total 528(75.4%) mothers were illiterate and 19(2.7%) were just literate. Katherine E Heck et al, 2006 has reported that women who had or whose partners had higher education levels, and women who had or whose partners had professional or executive occupations were more likely than their counterparts to breastfeed. Chhabra et al,  $1998^8$  have reported in their study that the rate of exclusive breastfeeding is almost similar in both literate and illiterate mothers. In contrast a number of studies report a contradictory situation, like a study in Maharashtra shows that practice of exclusive breastfeeding is more in illiterate mothers Gupta & Gupta,  $2003^5$  report in their study that the rate of exclusive breastfeeding is more in illiterate mothers (42.5%) as compared to literate mothers (38.4%) and the practice of giving other feeds or water is more in literate mothers.

Maximum numbers of predominantly breastfed children (52.5%) were in social class III and IV. Maximum numbers of predominantly top fed children (65.2%) were in social class III, while only top fed children were almost equally distributed in class II, III and IV of the social classification.

The pattern of breast feeding was not found to be associated with religion in our study. This shows that both the religious groups are similar in beliefs and practices i.e. they believed more in predominant breastfeeding rather than exclusive breastfeeding. But in a study done in the slums of Guwahati though the rate of exclusive breastfeeding was found to be high but if we compare Hindus and Muslims there was not much difference i.e. 51.02% Hindus and 45%

Muslims practiced exclusive breastfeeding till the age of six months (Sharma & Sharma, 2005)<sup>13</sup>.

Among the exclusively breastfed babies 54.8% were males and 45.2% females. More number of male children were either exclusively breastfed or predominantly breastfed compared to females and the difference was statistically significant. Chhabra et al, 1998<sup>8</sup> have reported exclusive breastfeeding to be equal in both sexes. The reason of variation in the present study could be that the male child is considered more precious in our setting and is therefore more cared for.

It was further observed that 58% mothers of the children who were being exclusively breastfed were in the age group of 20-30 years. Gupta and Gupta , 2003 also reports that 39.3% of the exclusively breastfeeding mothers were above 25 years, and 25.10% of mothers giving breast milk, other feed and plain water were  $\leq$  20 years of age.

#### CONCLUSION

In our study the exclusive breastfeeding rate was found to be very low. It was further observed that the exclusive breastfeeding rate decreased as the age of the child progressed from 0 to six months. The most common reasons given by the maximum number of respondents about not exclusively breastfeeding their children was that they felt that their milk secretion was insufficient. Most of the educated, young mothers were following exclusive breastfeeding. Significantly more number of male children were exclusively breastfeed but religion was not a significant factor for breastfeeding practices. The study shows that the feeding practices followed in the community are still influenced by the traditions, beliefs and old cultural practices. Family should support the females who are of the younger age to assist them in deciding the correct feeding practices of the children. Government should make more policies according to the felt needs of the mothers for the proper implementation of National Guidelines on Infant and Young Child Feeding and IMS act. More stress should be laid on a continuous IEC and BCC activities for promotion of exclusive breastfeeding.

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