

Original Research Article

A cross sectional study on breastfeeding practices among mothers of rural population in Bareilly district**Islam Afrin¹, Anas Ahmad Khan², Danish Imtiaz^{3*}**¹*Assistant Professor, Department of Community Medicine, Integral Institute of Medical Sciences (IIMS) Lucknow, Uttar Pradesh, India*²*Associate Professor, Department of Community Medicine, United Institute of Medical Sciences, Prayagraj, Uttar Pradesh, India*³*Assistant Professor, Department of Preventive and Social Medicine, Anugrah Narayan Magadh Medical College (ANMMMC) Gaya, Bihar, India***Received: 06-06-2021 / Revised: 02-07-2021 / Accepted: 25-08-2021****Abstract**

Background: Breastfeeding is the natural way of providing young infants with the optimal nutrients needed for healthy growth and development of infants. Following delivery, separation of mother and baby should be delayed for at least first hour to promote initiation of breastfeeding besides allowing uninterrupted skin-to-skin contact. As per National Family Health Survey (NFHS)-4 statistics, children under 3 years breastfed within one hour of birth was 40.1%. **Aim and Objective:** To study the breastfeeding practices among mothers belonging to rural population in Bareilly district of Uttar Pradesh. **Methodology:** The cross sectional study was conducted among the mothers who gave birth to a live baby within the last 6 months in the rural field practice area under RHTC of Department of Community Medicine, Shri Ram Murti Smarak Institute of Medical Sciences (SRMS IMS) at Bareilly, Uttar Pradesh. The study was conducted over a period of one year i.e. from 1st July 2015 to 30th June, 2016. Data collected was entered in SPSS Version 20. **Results:** Overall 300 mothers participated in the study and were enquired about their breastfeeding practices. It was observed that breast feeding was initiated within 1 hour in only 10(15.2%) of home deliveries as against 46(19.7%) institutional deliveries. Breast milk given as first feed to the baby after birth was more in 178(76.0%) institutional deliveries than 18(27.3%) home deliveries. **Conclusion:** This study necessitate the need for breastfeeding intervention programs to be organized especially for the antenatal mother and during postnatal check-ups to sensitize them about the importance of early initiation of breastfeeding and exclusive breastfeeding besides cautioning them against harmful and widely prevalent practice of prelacteal feeding.

Key words: Breastfeeding, Exclusive breastfeeding, Infants

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Introduction

The fourth and fifth Millennium Development Goals aimed at reducing child and maternal mortality by 2015[1]. Child survival has shown substantial improvement globally, but progress has been slow for maternal, perinatal and neonatal health[2,3]. Birthing is a natural phenomenon but is accompanied with danger for both mother as well as newborn especially in developing countries. Newborn period is the crucial period in laying the foundation of good health. At this time specific biological and psychological needs must be met to ensure the survival and healthy development of the child into a future adult[4]. About 1.2 million neonates die annually in India alone accounting for about 1/4th of global neonatal deaths[5].

Breastfeeding is the natural way of providing young infants with the nutrients they need for healthy growth and development. Following delivery, routine newborn care procedures that separate mother and baby should be delayed for at least first hour to allow mother and newborn to be in uninterrupted skin-to-skin contact to encourage and promote initiation of breastfeeding within the first hour[6]. National Family Health Survey (NFHS)-4 shows children under 3 years breastfed within one hour of birth was 40.1%[7].

Breastfeeding has well-established short-term benefits, particularly the reduction of morbidity and mortality due to infectious diseases in childhood. The importance of breastfeeding for infant nutrition and the prevention of infant morbidity and mortality as well as the prevention of long-term chronic diseases are well established, and thus breastfeeding is an essential component of infant and child survival and health programs[8].

The present study aims to study the breastfeeding practices of rural mothers in Bareilly district of Uttar Pradesh.

Material and methods

This cross sectional study was conducted in the field practice area under Rural Health Training Centre (RHTC) of Department of Community Medicine, Shri Ram Murti Smarak Institute of Medical Sciences (SRMS-IMS) at Bareilly, Uttar Pradesh. The study was conducted over a period of one year i.e. from 1st July 2015 to 30th June, 2016. Study population comprised of mothers residing in the field practice area under RHTC. Study subjects included all mothers who gave birth to a live baby within the last 6 months prior to initiation of study. Verbal consent was obtained from study subjects. Those not giving consent were excluded from the study.

Considering rate of initiation of breastfeeding within one hour of birth in India to be 39.8% as per DLHS-3 (2007-08), sample size of 295 was calculated using allowable error as 15% of prevalence and 10% of non-response rate, which was further rounded off to 300. So, total of 300 mothers participated in the study.

Twelve villages out of the twenty-four villages coming under field practice area under RHTC were selected using simple random sampling. In the selected 12 villages, list of all eligible Recently Delivered Women (RDW) was obtained and household were visited

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and inquiry was made regarding the availability of an eligible RDW who was then interviewed. The process was continued till 300 RDW were interviewed across twelve villages.

The data collected using pre-designed and pretested questionnaire was entered in Microsoft Excel and statistical analysis was done using SPSS version 20.0. Categorical variables were analyzed using frequency with proportions and percentages. Association between categorical variables was established by Chi square test. For testing the difference between two proportion Z tests was applied.

Results

Table-1 show that majority of mothers 212 (70.8%) were in the age group of 24-29 years followed by 58 (19.3%) of subjects who

belonged to 30-35 years age group. More than two-third of the study subjects belonged to 204(68.0%) joint family while 96(32.0%) belonged to nuclear family. Majority 213 (71.0%) of the respondents belonged to Hindu religion and remaining 87(29.0%) belonged to the Muslim community. Educational status of mothers showed 82(27.4%) of mothers being illiterate while slightly more than half 166 (55.3%) of study subjects had education of primary and above. About 123(41.0%) of mothers were housewives. Nearly two-third of mothers 193(64.4%) belonged to lower middle class. More than two third of mothers 211(70.4%) had two or more than two children. Majority of deliveries 234(78.0%) took place at Institution compared to 66(22.0%) home deliveries.

Table 1: Socio-Demographic Characteristics of Mothers

Variables	Number (N=300)	Percentage (%)
Age distribution (in years)		
18-23	23	7.6
24-29	212	70.8
30-35	58	19.3
Above 35	7	2.3
Types of Family		
Nuclear	96	32.0
Joint	204	68.0
Religion		
Hindu	213	71.0
Muslim	87	29.0
Caste		
General	132	44.0
OBC	168	56.0
Educational status		
Illiterate	82	27.4
Read and Write	52	17.3
Primary and above	166	55.3
Occupation		
Working	177	59.0
Housewife	123	41.0
Socio-economic class		
Upper class	5	1.6
Upper middle class	6	2.0
Middle class	26	8.6
Lower middle class	193	64.4
Lower class	70	23.4
Parity		
<2	89	29.6
≥2	211	70.4
Type of Delivery		
Home	66	22.0
Institutional	234	78.0

It was observed that breast feeding was initiated within an hour of birth in only 10 (15.2%) of home deliveries as against 46 (19.7%) of institutional deliveries and it was found to be insignificant on statistical analysis. (Table-2)

Table 2: Distribution according to Timing of initiation of Breastfeeding

Breastfeeding Practices	Home (n=66)	Institutional (n=234)	Chi- square value	P value
Time of initiating Breastfeeding				
<1 hour	10(15.2)	46(19.7)	0.689	0.40
≥ 1 hour	56(84.8)	188(80.3)		

(Parenthesis given in bracket is percentage)

It is evident from table-3 that more than three fourth 178(76.1%) of the mothers who delivered at the institution was practicing exclusive breast feeding compared to only 18(27.2%) home deliveries and it was found to be significant on statistical analysis.

Table 3: Distribution of mothers according to exclusive Breastfeeding practices

Exclusive Breastfeeding	Home (n=66)	Institutional (n=234)	Chi- square value,df	p value
Yes	18(27.2)	178(76.1)	54.12,1	0.001
No	48(72.8)	56(23.9)		

Table-4 shows that the practice of giving breast milk as first feed was found to be more in 178(76.0%) institutional deliveries compared to 18(27.3%) home deliveries and it was found to be statistically significant ($p=0.001$). The practice of giving pre-lacteal feeds such as honey and ghutti was found to be more in home deliveries (16.7% and 15.1% respectively) than institutional deliveries (2.3% and 0.8% respectively).

Table 4: Distribution of newborns by place of delivery and type of first feed given after birth

Breastfeeding Practices	Home (n=66)	Institutional (n=234)	Z score	p value
First feed after Birth				
Breast milk	18(27.3)	178(76.0)	3.69	0.001
Water	11(16.7)	15(6.4)	2.61	0.004
Honey	11(16.7)	5(2.3)	1.86	0.03
Ghutti	10(15.1)	2(0.8)	1.51	0.06
Cow Milk	16(24.2)	34(14.5)	1.45	0.07

Figures in parenthesis indicates percentages

Table-5 shows that colostrum feeding was practiced more in institutional deliveries 192(82.0%) than home deliveries 20(27.3%). The association between colostrums feeding practices and mode of delivery was found to be statistically significant ($p<0.05$).

Table 5: Distribution of newborns according to practice of Colostrum feeding

Colostrum	Home (n=66)	Institutional (n=234)	Chi- square value, df	p value
Fed	20(30.3)	192(82.0)	66.50,1	0.001
Discarded	46(69.7)	42(18.0)		

Table 6: Reasons for discard of Colostrum

Reasons for discard of Colostrum	Home (46)	Institutional (n=42)
Social customs	22(47.9)	23(54.7)
Family restriction	14(30.4)	12(28.6)
Ignorance	5(10.9)	3(7.1)
Not good for baby	3(6.5)	2(4.8)
Digestion problem	2(4.3)	2(4.8)

Figures in parenthesis indicates percentages

Among reasons cited for not feeding colostrum, social custom was cited as predominant reason for not feeding colostrum in both home delivery 22(47.9%) and institutional delivery 23(54.7%) followed by familial restriction 14(30.4%) and 12(28.6%) respectively.

Discussion

In the present study, majority of mothers 212 (84.0%) were in the age group of 24-29 years which is contrary to the findings of Manju Rahi et al[9] study where 60% of mothers were in the age group of 21-25yrs. In the study more than three fourth of study subjects 204 (68.0%) belonged to joint family while 96 (32.0%) belonged to nuclear family which is contrary to Khan et al[10] study where majority of study subjects belonged to nuclear family (60.9%). Majority 213 (71.0%) of the respondents belonged to Hindu religion and remaining 87 (29.0%) belonged to the Muslim community which is comparable to study conducted by Manju Rahi et al[9] in which the study population consisted mostly of Hindus (93.9%). Another study by Chandrasekhar T et al[11] found majority of study population as Hindus(81.7%). On the contrary, Yasmin et al[12] study in Bangladesh revealed majority of mothers (77.0%) belonging to Muslim community. Observation of this study showed more than half of mothers had education of primary level and above while more than one fourth of study subjects were illiterates whereas in Manju Rahi et al[9] study only 33(40.2%) of mothers were educated upto primary level and above while illiterate population constituted a mere 11(13.4%). Another study by Madhu et al[13] showed a more than half of mothers (52%) as illiterates. In the present study, 59% of mothers were working population whereas 41% were housewives which is in contrast to study by Madhu et al[13] in which more than three fourth of study subjects were housewives.

In the present study, majority of mothers 193(64.4%) belonged to lower middle class which is in contrast to study by Sonia puri et al[14] where more than three fourth (69.0%) of study subjects belonged to upper class. Only 29.0% of the mothers in present study were primiparous the finding of which is in sharp contrast to study by Yasmin et al[12] where nearly half of study subjects were

primiparous (48.0%). The results of study showed majority of deliveries taking place in institution which is higher compared to countries average of 41% as per NFHS-III[15].

Breastfeeding should be initiated within 30 minutes of delivery[13]. The delay in initiation will lead to delay in development of oxytocin reflexes which is important for contraction of uterus and breast milk reflex. The observation in our study showed that only 56(18.7%) mothers initiated breastfeeding within an hour of birth which is low compared to Mummadi et al[16] study in Hyderabad where more than half of mothers initiated breastfeeding within an hour of birth. Dhillion et al[17] study on new born care practices in home births in rural India reported only 6.0% mothers initiating breast feeding within one hour of birth and 38.2% within 24 hours.

Exclusive breastfeeding should be continued for 6 months[13]. It gives protection against infection, malnutrition and contribute in overall development of child. Nearly two-third of mothers 196(65.3%) practiced exclusive breastfeeding which is higher than as reported by Mummadi et al[16] study in Hyderabad where 54% mothers practiced exclusive breastfeeding. In contrast Roy et al[18] in Kolkata reported a low percentage (28.3%) of children who were exclusive breastfed in the study.

About 65.3% of mothers gave breast milk as the first feed to their child which is in contrast to study by Manju Rahi et al[9] studies in which about 27(32.9%) newborns were given breastmilk as the first feed. Pre-lacteal feeds such as honey and ghutti were given more in home deliveries (16.7% and 15.1% respectively) than institutional deliveries (2.1% and 0.8% respectively). The findings are comparable to study by Mummadi et al[16] study in Hyderabad. The practice of pre-lacteal feeding is very common in India as reported by study by Singh MB et al[19] and Deshpande et al[20]. The pre-lacteal feeds has

the propensity to cause enteric infections and affect establishment of lactation by delaying early initiation of breastfeeding[9].

In the present study, colostrum feeding was practiced more in institutional deliveries 192 (82.0%) than home deliveries 20 (30.3%) and this difference was found to be significant ($p < 0.05$). The findings of study are comparable to Manju Rahi et al[9] study where colostrum was given to baby in 26 (72.2%) hospital deliveries as against 32 (69.5%) of home deliveries.

Conclusion

There is an urgent need to make the community aware of advantages and promotion of institutional deliveries along with a need to improve breastfeeding practices both in hospitals as well as in home deliveries which can be achieved by education of mothers and traditional birth attendants through specifically designed breastfeeding training programmes aimed at promoting early and exclusive breast feeding practices.

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