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Breastfeeding practices and its determinants: a descriptive cross sectional study in Aligarh

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ABSTRACT

Background: The study was aimed to study the practices related to breastfeeding among newborns in Aligarh and to assess the determinants of breastfeeding practices.

Methods: A cross sectional study was carried out in the field practice areas of Department of Community medicine, AMU, Aligarh. All the live births in one-year study duration were included in the study. Verbal consent was obtained prior to the interview. Data was collected by interview technique using semi structured questionnaire and analysed in SPSS 20.

Results: A total of 705 newborns were enrolled in the study. 5.3% of the mothers in our study didn't breastfeed their newborns even after 24 hours after the delivery. 6% of the mothers discarded their colostrum and 36.9% of mothers gave prelacteals to their newborns. Almost half of the newborns were exclusively breastfed. There is a significant association between being primiparous and not practicing exclusive breastfeeding (p=0.003). However, no significant association was found between breastfeeding practices and gender, birth order of newborn, age and education of mother.

Conclusions: Present study shows that 64.2% of newborns received the right breastfeeding practices which is quite good as per the national average. This study emphasizes the need to address the practices like discarding the colostrum and use of prelacteal feed which are still widely prevalent.

Keywords: Breastfeeding practices, Colostrum intake, Determinants of breastfeeding, Exclusive breastfeeding, Time of initiation

INTRODUCTION

Neonatal mortality is an important indicator of quality of healthcare of a country.¹ Neonatal mortality can be decreased by adopting correct newborn care practices. Breastfeeding is one of the most important determinants of child survival, birth spacing and prevention of childhood infections.² The beneficial effects of breastfeeding depend on breastfeeding initiation, its duration, and the age at which the breast-fed child is

weaned. Breastfeeding practices vary among different regions and communities.²

National family health survey-4 of India has revealed startling lower exclusive breastfeeding (EBF) rates (41.6%) in the state of Uttar Pradesh.³ In India, breastfeeding in rural areas appears to be shaped by the beliefs of a community, which are further influenced by social, cultural, and economic factors.² WHO and UNICEF recommend: Early initiation of breastfeeding

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within 1 hour of birth, Exclusive breastfeeding for the first 6 months of life and Continued breastfeeding up to 2 years of age or beyond, with introduction of nutritionally adequate and safe complementary (solid) foods at 6 months.⁴ In addition, there are many unusual breastfeeding practices prevalent in the area such as delay in initiation of breastfeeding even in normal delivery, prelacteal feeding in the form of honey, tea, ghutti etc., restricting feeding of colostrum, etc.

Hence this study was planned with the objectives of assessing the practices about breastfeeding and to study the determinants of breastfeeding practices.

METHODS

The present study was cross sectional type of study done at the field practice areas of Department of Community Medicine, AMU, Aligarh from June 2016 to June 2017. Verbal consent was taken from mothers prior to conducting the study. A pre-tested, semi structured questionnaire was used. All the live births in the study duration were included. A door to door visit was conducted to identify the newborns and their mother were interviewed about the breastfeeding practices. The questionnaire included socio-economic and demographic data, details on the time of initiation of breast feeding, colostrum and prelacteal feeding etc.

Statistical analysis

The data was entered and analysed in SPSS 20 and results were presented in frequency and percentages. Chi square test was used for the association and the value of p<0.005 was taken statistically significant.

Ethical clearance was taken from the Institutional Ethical Committee, J. N. Medical College, AMU, Aligarh.

RESULTS

Socio-demographic profile

A total of 705 live births were reported in the study. Socio-demographic characteristics of study population are shown in Table 1.

Half of the population belonged to Hindu religion. The mean age of the mothers was 26.32 years with a range of 18-40 years. About half of the mothers were illiterate. Majority of the mothers were homemaker by occupation. About half of the respondents belonged to social class IV, according to Modified B G Prasad Classification, May 2018.

There were equal proportion of male and female newborns. The majority of the study population belonged to birth order of more than one.

Table 1: Socio-demographic profile of the study population.

Variable	Categories	N (%) (N=705)		
	Islam	343 (48.6)		
Religion	Hindu	358 (50.7)		
	Christian	04 (0.7)		
Mother's age (in years)	<20	80 (11.3)		
	21-30	517 (73.3)		
	31-40	108 (15.4)		
Mother's education	Illiterate	328 (46.5)		
	Literate	377 (53.5)		
Mother's occupation	Homemaker	697 (98.9)		
	Working	08 (1.1)		
	Class I	16 (2.2)		
Social class	Class II	74 (10.4)		
	Class III	144 (20.4)		
	Class IV	309 (43.8)		
	Class V	162 (23.2)		
Gender	Male	389 (50.1)		
	Female	316 (49.9)		
D:411	1	245 (34.7)		
Birth order	>1	460 (65.3)		

Breastfeeding practices

Table 2 is showing the breastfeeding practices adopted by the mothers.

Table 2: Breastfeeding practices in the study population (n=705).

Breastfeeding	N 1 (0/)
Time of initiation (hours)	Number (%)
1	375 (53.1)
1-24	107 (15.1)
>24	186 (26.3)
Not given	37 (5.3)
Total	705 (100)
Colostrum intake	
Absent	52 (6)
Present	653 (94)
Total	705 (100)
Prelacteals intake	
Absent	445 (63.1)
Present	260 (36.9)
Total	705 (100)
Type of prelacteal	
Tea	78 (11)
Honey	52 (7.3)
Ghutti	98 (13.9)
Others	32 (4.7)
None	445 (63.1)
Total	705 (100)
Exclusive breastfeeding	
Absent	361 (51.3)
Present	344 (48.7)
Total	705 (100)

Time of initiation of breastfeeding

Half of the mothers initiated breastfeeding with in 1 hour of delivery, one fourth of them started breastfeeding after 24 hours of birth. A total of 5.3% of the mothers in our study didn't breastfeed even after 24 hours after the delivery due to absence of lactation or advice from mother in law.

Colostrum intake

6% of the mothers discarded their colostrum due to the belief of being bad milk and indigestible by the baby.

Prelacteals

About one third (36.9%) of mothers gave prelacteals to their newborns.

Type of prelacteals

A total of 11% of the babies were fed with tea alone for more than 48 hours. Honey (7.3%) and ghutti (13.9%) were also commonly used pre lacteal feeds.

Exclusive breastfeeding

Almost half of the newborns were exclusively breastfed.

Table 3: Determinants of breastfeeding practices (gender and birth order).

Categories	Gender			Birth order		
Time of initiation of	Male	Female	P value	One	>One	P value
breastfeeding (hours)	N (%)	N (%)	1 value	N (%)	N (%)	r value
<1	204 (53.4)	178 (46.6)		115 (30.1)	267 (69.9)	
1-24	60 (56.1)	47 (43.9)		41 (38.3)	66 (61.7)	
>24	104 (58.4)	74 (41.6)	0.734	78 (43.8)	100 (56.2)	0.010
Not given	21 (55.3)	17 (44.7)		11 (28.9)	27 (71.1)	
Colostrum intake						
Absent	24 (46.2%)	28 (53.8)	0.174	16 (30.8)	36 (69.2)	0.521
Present	365 (55.9)	288 (44.1)	0.174	229 (35.1)	424 (64.9)	0.531
Prelacteals intake						
Absent	232 (53.6)	201 (46.4)	0.202	134 (30.9)	299 (69.1)	0.007
Present	157 (57.7)	115 (42.3)	0.282	111 (40.8)	161 (59.2)	0.007
Exclusive breastfeeding						
Absent	206 (57.1)	155 (42.9)	0.202	144 (39.9)	217 (60.1)	0.002
Present	183 (53.2)	161 (46.8)	0.302	101 (29.4)	243 (70.6)	0.003

Table 4: Determinants of breastfeeding practices (age and literacy of mother).

Categories	Age of mother (in years)			Literacy of mother			
Time of initiation of	<20	21-30	31-40	P value	Uneducated	Educated	D volue
breastfeeding (hours)	N (%)	N (%)	N (%)		N (%)	N (%)	P value
1	40 (10.5)	280 (73.3)	62 (16.2)		188 (49.2)	194 (50.8)	
1-24	11 (10.3)	83 (77.6)	13 (12.1)		47 (43.9)	60 (56.1)	
>24	19 (10.7)	136 (76.4)	23 (12.9)	0.024	76 (42.7)	102 (57.3)	0.475
Not given	10 (26.3)	19 (50)	09 (15.2)		17 (44.7)	21 (55.3)	
Colostrum intake							
Absent	09 (17.3)	32 (61.5)	11 (21.2)	0.124	21 (40.4)	31 (59.6)	0.356
Present	71 (10.9)	486 (74.4)	96 (14.7)		307 (47)	346 (53)	
Prelacteals intake							
Absent	41 (9.5)	323 (74.6)	69 (15.9)	0.128	201 (46.4)	232 (53.6)	0.944
Present	39 (14.3)	195 (71.7)	38 (14)		127 (46.7)	145 (53.3)	
Exclusive breastfeeding							
Absent	54 (15)	257 (71.2)	50 (13.9)	0.007	166 (46)	195 (54)	0.768
Present	26 (7.6)	261 (75.9)	57 (16.6)		162 (47.1)	182 (52.9)	

Determinants of breastfeeding

Gender

The determinants of breastfeeding practices are shown in Table 3 and Table 4.

Among 46.6% female newborns the breastfeeding was initiated in less than one hour. The colostrum was

discarded in 53.8 % of female newborns. The prelacteals were given in 57.7% of male newborns and exclusive breastfeeding was practiced in 53.2% of male newborns. The observed difference for breastfeeding practices among male and female newborns is not statistically significant.

Birth order

Among primiparous mothers only 30.1% initiated breastfeeding in less than one hour, 30.8% discarded colostrum, 40.8% gave prelacteals and 29.4% practiced exclusive breastfeeding. There is a significant association between being primiparous and and not practicing exclusive breastfeeding (p=0.003).

Age of mother

It was observed that among the mothers who belonged to age group of <20 years, only 10.5% were initiated breastfeeding in <1 hour, 17.3% discarded colostrum, 14.3% given prelacteals to their newborns and only 7.6% were practicing EBF. There is no significant association between age of mother and breastfeeding practices.

Literacy of mother

49.2% uneducated mother initiated breastfeeding in <1 hour, 40.4% discarded colostrum, 46.7% given prelacteals and 46% did not practice exclusive breastfeeding. No significant association was found between the literacy of mother and breastfeeding practices

DISCUSSION

Time of Initiation of breastfeeding: The breast milk should be initiated as early as possible or within 30 minutes of delivery. The delay in initiation will lead to a delay in the development of oxytocin reflexes, which are very important for the contraction of the uterus and the breast milk reflex. In present study, half of the mothers initiated breastfeeding within 1 hour of childbirth, which is a good practice. However, rest of them delayed it and the reasons for delaying it were family restrictions, insufficient lactation, illness of mother and baby. A study conducted in Karnataka reported that 44% of the mothers initiated breastfeeding within 30 minutes after delivery.² In rural Maharashtra, it was observed that 35% of mothers initiated breastfeeding within 30 minutes after delivery.5 In contrast to our study, Kishore et al reported that only 19% mothers had initiated breastfeeding within first hour of life.6 The early initiation of breastfeeding was more in male newborns whereas younger (<20 years), primiparous and uneducated mothers delayed the breastfeeding. No significant association was found between early initiation of breastfeeding and gender, birth order, education and age of mother. In contrast to that, Raval et al reported a significant association of early initiation of breastfeeding with literacy of mother and birth order of newborn.⁷

Colostrum intake

In the present study 6% of newborns were not given colostrum due to relatives' advice. Majority of newborns were deprived of colostrum due to their parent's wrong belief that colostrum is infectious and indigestible. In contrast to this, study conducted in Maharashtra reported 15.2% and in Gujarat 36.9% of mothers discarded the colostrum. Out of total newborns, 55.9% males received colostrum, 30.8% primiparous and 40.4% uneducated mothers discarded colostrum. No significant association was found between these factors and breastfeeding practices.

Prelacteals

Ideally prelacteals should not be given to the newborns but wrong belief and cultures lead people to think that prelacteal feed is good for newborn. In present study, 36.9% of mothers gave prelacteal to their newborns whereas in a study in rural Maharashtra 23.5% of mothers gave prelacteal to their newborns.⁵ In another study in similar settings, they have reported that 19% of newborns were given prelacteals.² In contrast to present study, another study in Gujarat reported a high rate (61.9%) of prelacteals given to newborns.⁶ The practice of giving prelacteals was not significantly associated with gender, literacy of mother, age and parity of mother.

Type of prelacteals

Out of 260 newborns, half of them received "ghutti" with a major belief that it will strengthen the digestive system of the baby, while others received tea and honey as prelacteal feed. The common reasons for giving prelacteal feed was family customs and old practices which were prevalent in their families. Raval D et al in Gujarat reported different types of prelacteal feed given to newborns which includes jaggery water, patasa water and cow or goat milk. Madhu K et al in Karnataka also reported a total of 13% of the babies were fed with sugar water, Honey (6%) and ghee (3%) were also commonly used pre lacteal feeds.

Exclusive breastfeeding

Exclusive breastfeeding should be continued for 6 months. It protects the child from malnutrition, infections, and helps the overall development of the child. In this study, half of the mothers practice exclusive breastfeeding for a period of six months and rest of them started complimentary feeding at an earlier age. The common reason given for the start of complementary feeding was insufficient milk. In cohesion to our study, Madhu et al in Karnataka observed similar finding of EBF (40%) for 6 months. The practice of exclusive breastfeeding was significantly associated with

birth order of newborn however it was not associated with gender, education and age of mother.

CONCLUSION

The present study shows that 48.7% of newborns were exclusively breastfed which is quite good as per the state (Uttar Pradesh) average. However, this study emphasizes the need to address the practices like discarding the colostrum and use of prelacteal feed which are still widely prevalent in the study population. Strengthening of information, education and counselling for antenatal women with active involvement of ASHA/AWW/ANM regarding timely initiation of breastfeeding following delivery, duration of exclusive breastfeeding, and importance of feeding colostrum.

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REFERENCES

- 1. Chauhan A, Shah MS, Khalique N, Eram U. A community based study of neonatal mortality in Aligarh by using verbal autopsy. Int J Community Med Public Health. 2018;5(6):2491-4.
- 2. Madhu K, Chowdary S, Masthi R. Breast feeding practices and newborn care in rural areas: a descriptive cross-sectional study. Indian J Community Med. 2009;34(3):243.

- 3. NFHS-4 2015-2016 State Fact sheet Uttar Pradesh. Available at: http://rchiips.org/nfhs/pdf/NFHS4/UP FactSheet.pdf. Accessed on 03 December 2019.
- 4. WABA Home 2019- World Alliance for Breastfeeding Action. Available at: http://waba.org.my/. Accessed on 03 December 2019.
- 5. Bobhate PS, Shrivastava SR. Breastfeeding practices and factors associated with it: a cross sectional study among tribal women in Khardi Primary Health Centre, Thane, India. Int J Public Health Res. 2012;2(1):115-21.
- 6. Kishore MS, Kumar P, Aggarwal AK. Breastfeeding knowledge and practices amongst mothers in a rural population of North India: a community-based study. J Trop Pediatr. 2008;55(3):183-8.
- 7. Raval D, Jankar D, Singh M. A study of breast feeding practices among infants living in slums of Bhavnagar city, Gujarat, India. Religion. 2011;78(5.44):0-19.
- 8. World Health Organization. The optimal duration of exclusive breastfeeding: a systematic review. Geneva: World Health Organization; 2001.
- 9. Arifeen S, Black RE, Antelman G, Baqui A, Caulfield L, Becker S. Exclusive breastfeeding reduces acute respiratory infection and diarrhea deaths among infants in Dhaka slums. Pediatrics. 2001;108(4):e67.
- Dewey KG, Cohen RJ, Brown KH, Rivera LL. Effects of exclusive breastfeeding for four versus six months on maternal nutritional status and infant motor development: results of two randomized trials in Honduras. J Nutr. 2001;131(2):262-7.

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