ANALYSIS OF BREASTFEEDING PRACTICES IN THE FEMALES RESIDING IN URBAN INDIA: A COMMUNITY-BASED STUDY

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ABSTRACT

Background: Exclusive breastfeeding protect infants from various diseases and hence, has a vital role in the reduction of infant mortality rates and in reaching sustainable health development goals. Various community-based programs are being conducted to increase breastfeeding awareness.

Aims: To evaluate the associated factors and prevalence of exclusive breastfeeding in the females residing in urban India.

Methods: The study included 358 lactating females assessed through a pre-validated structured questionnaire for breastfeeding practices for the data collection which was later statistically analyzed for results formation.

Results: Exclusive breastfeeding was practiced in 74.86% (n=268) study subjects, whereas, in 25.1% (n=90) subjects complementary feeding was practiced. On assessing the reason for not practicing the exclusive breastfeeding in the study subjects, there were social reasons reported by 57.7% (n=52) subjects, mother's illness was the reason for not practicing exclusive breastfeeding in 15.5% n=14) study subjects, and child's illness in 26.6% (n=24) study subjects. 26.53% of females fed the infant regularly, whereas, 72.62% only fed the child after they cried. Burp following feeding was practiced by 98.88% (n=354) of study subjects. Pre-lacteal feed was taken by only 22.34% (n=80) of study subjects. Colostrum was fed to the newborn only by 78.77% (n=282) study subjects, whereas, colostrum was discarded by 21.22% (n=76) study females.

Conclusion: The present study concludes that exclusive breastfeeding for 6 months followed by complementary feeding, colostrum feeding, and early initialization of breastfeeding in the females of urban India is in acceptable norms attributed to awareness programs.

Keywords: Breastfeeding, colostrum, complementary feeding, exclusive breastfeeding, pre-lacteal feeding.

INTRODUCTION

Complete and natural first food for newborn infants is breast milk which fills all the nutritional needs of the infants and is exclusively given to all the infants for the first six months of their life. In addition, breast milk also fulfills the nutritional demands of the children in the second year of life. The behavioral and mental development of infants is largely derived from breast milk as it also protects the child from various infectious and non-infectious diseases by developing immunity. It is a two-way safety as it protects the mother from breast and ovarian cancer by reducing the associated risk and has a role in the family planning process.[1]

During the exclusive breastfeeding time, no drinks or foods are allowed to infants during the initial 6 months except the breast milk. Infant mortality rates secondary to pneumonia and diarrhea-like disease are also markedly reduced in subjects who are on exclusive breastfeeding. Nearly one-tenth of child deaths can be prevented by exclusive breastfeeding practices. With its ability to reduce infant mortality rates, exclusive breastfeeding can help in attaining sustainable health development goals. Despite various benefits of the exclusive breastfeeding practices being reported, the prevalence reported is quite low.[2]

Based on NFHS (national-level household and facility survey), the prevalence of exclusive breastfeeding in Indian females ranges from 46% to 55% as surveyed in 2005 and 2016. The prevalence of exclusive breastfeeding has decreased in the six Indian states namely Kerela, Arunachal Pradesh, Karnataka, Chhattisgarh, West Bengal, and Uttar Pradesh as suggested by the NFHS survey. The maximum reduction is seen in the state of Uttar Pradesh which was 51.3% in 2005 and has markedly reduced to 41.6% in the year 2016. More decline is seen in the females residing in urban areas as compared to the rural areas.[3]

Various steps are being taken by social mobilization, community healthcare workers, and health education departments in various parts of the country to develop breastfeeding awareness and to improve complementary breastfeeding and exclusive breastfeeding practices in Indian females in both rural and urban areas.[4] The present study was done to evaluate the associated factors and prevalence of exclusive breastfeeding in females residing in urban India.

MATERIALS AND METHODS

The present community-based cross-sectional study was done to evaluate the associated factors and prevalence of exclusive breastfeeding in the females residing in urban India. The study was done after Ethical committee clearance was given by the Institutional Ethical committee. The study population was comprised of lactating females visiting the Outpatient Department of the Institute.

The inclusion criteria for the study were lactating females, in the age range of 18-45 years, having a child of age between 6 months and 2 years, residing in the urban area, and who were willing to participate in the study. The exclusion criteria were lactating subjects having a

child of age <6 months or >2 years, mentally challenged subjects, and subjects who did not give consent.

The study included 358 lactating females in the age range of 18-45 years residing in the areas with a lack of facilities and legal approvals. For the present study, all the eligible females, after explaining the detailed study design, informed consent was taken from subjects in both written and verbal form. Exclusive breastfeeding for the study was defined as only breastmilk feeding in the infants for the first 6 months.

After the final inclusion of the study subjects, all the subjects were given a pre-assessed, pre-validated, and structured questionnaire that assessed the awareness and practices of breastfeeding. To assess the socioeconomic status of the study females, modified the Kuppuswamy scale of 2019.[5] For the present study, the outcome variable was breastfeeding prevalence in the lactating females. The independent variables assessed were socioeconomic characteristics, demographic characteristics, female education, and/or religion.

The collected data were subjected to statistical evaluation using SPSS version 20, Chicago Inc., USA. The data were expressed in percentage and number, and mean and standard deviation. The level of significance was kept at $p<0.05$. The tests used were Chi-square, student t-test, and ANOVA.

RESULTS

The present community-based cross-sectional study was done to evaluate the associated factors and prevalence of exclusive breastfeeding in the females residing in urban India. For the breastfeeding characteristics in the study subjects, 26.53% of females fed the infant regularly, whereas, 72.62% only fed the child after they cried. Burp following feeding was practiced by 98.88% (n=354) of study subjects. Pre-lacteal feed was taken by only 22.34% (n=80) of study subjects. Colostrum was fed to the newborn only by 78.77% (n=282) study subjects, whereas, colostrum was discarded by 21.22% (n=76) study females. The child was born at home in 11.17% (n=40) females, in public hospital for 37.98% (n=136) subjects, and in private hospitals for 53.63% n=192) females. Breastfeeding was initiated within <1 hour, 1-4 hours, 5-24 hours, and >24 hours in 63.68% (n=228), 13.96% (n=50), 11.73% (n=42), and 10.61% n=38) study subjects respectively (Table 1).

For the correlation of a sociodemographic variable with the exclusive breastfeeding, it was seen that for socioeconomic status and exclusive breastfeeding, a significant correlation was seen where for >6 months 188 females from lower-class 158 females from the middle class, and 12 females from the upper class fed their child. This was statistically significant with p=0.01. For religion, occupation, and educational status, no significant association was seen with the exclusive breastfeeding with respective p-values of 0.345, 0.494, and0.98 respectively as shown in Table 2.

In 74.86% (n=268) of study subjects, exclusive breastfeeding was practiced, whereas, in 25.1% (n=90) of subjects complementary feeding was practiced. On assessing the reason for not practicing the exclusive breastfeeding in the study subjects, there were social reasons reported by 57.7% (n=52) subjects, mother's illness was the reason for not practicing

exclusive breastfeeding in 15.5% n=14) study subjects, and child's illness in 26.6% (n=24) study subjects as depicted in Table 3.

For the complementary feeding characteristics, food types were Dalia, Dal, Khichri, and other foods in 52.51% (n=188), 49.72% (n=178), 58.10% (n=208), and 64.80% (n=232) study subjects respectively. The complementary breastfeeding time was before 6 months in 10.61% (n=38) study participants, at 6 months i9n 42.45% (n=152) subjects, and after 6 months in 46.92% (n=168) study subjects respectively (Table 4).

DISCUSSION

the breastfeeding characteristics of the study subjects 26.53% of females fed the infant regularly, whereas, 72.62% only fed the child after they cried. Burp following feeding was practiced by 98.88% (n=354) of study subjects. Pre-lacteal feed was taken by only 22.34% (n=80) of study subjects. Colostrum was fed to the newborn only by 78.77% (n=282) study subjects, whereas, colostrum was discarded by 21.22% (n=76) study females. The child was born at home in 11.17% (n=40) females, in public hospital for 37.98% (n=136) subjects, and in private hospitals for 53.63% n=192) females. Breastfeeding was initiated within <1 hour, 1-4 hours, 5-24 hours, and >24 hours in 63.68% (n=228), 13.96% (n=50), 11.73% (n=42), and 10.61% n=38) study subjects respectively. These findings were consistent with the studies of Das S et al[6] in 2018 and Punj A et al[7] in 2016 where authors assessed subjects having comparable breastfeeding habits as in the subjects of the present study.

Concerning the correlation of a sociodemographic variable with the exclusive breastfeeding, the study results showed that for socioeconomic status and exclusive breastfeeding, a significant correlation was seen where for >6 months 188 females from the lower class 158 females from the middle class, and 12 females from the upper class fed their child. This was statistically significant with p=0.01. For religion, occupation, and educational status, no significant association was seen with the exclusive breastfeeding with respective p-values of 0.345, 0.494, and0.98 respectively. These results were in agreement with the results of Singhal P et al[8] in 2013 and Parashar P et al[9] in 2018 where a similar correlation was seen between socioeconomic status an

Exclusive breastfeeding was practiced in 74.86% (n=268) of study subjects, whereas, in 25.1% (n=90) subjects complementary feeding was practiced. On assessing the reason for not practicing the exclusive breastfeeding in the study subjects, there were social reasons reported by 57.7% (n=52) subjects, mother's illness was the reason for not practicing exclusive breastfeeding in 15.5% n=14) study subjects, and child's illness in 26.6% (n=24) study subjects. These results were in line with the results of Shaili V et al[10] in 2012 and Ravall D et al[11] in 2011 where authors reported the most common reason for not practicing exclusive breastfeeding as either social, child illness, or mother's illness.

Concerning the complementary feeding characteristics, food types were Dalia, Dal, Khichri, and other foods in 52.51% (n=188), 49.72% (n=178), 58.10% (n=208), and 64.80% (n=232) study subjects respectively. The complementary breastfeeding time was before 6 months in 10.61% (n=38) study participants, at 6 months i9n 42.45% (n=152) subjects, and after 6 months in 46.92% (n=168) study subjects respectively. These findings were consistent with

the results of Madhu K et al[12] in 2009 and Ahmad S et al[13] in 2014 where authors also reported Khichri, Dalia, and Dal as common complementary foods to breastfeeding.

CONCLUSION

Within the limitations of the present study, it was concluded that exclusive breastfeeding for 6 months followed by complementary feeding, colostrum feeding, and early initialization of breastfeeding in the females of urban India is within the acceptable norms attributed to awareness programs. However, the present study had a few limitations including small sample size, short monitoring time, and geographical area biases. Hence, more longitudinal studies with a larger sample size and longer monitoring period will help reach a definitive conclusion.

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TABLES

Breastfeeding Characteristics	**Subgrouping**	**%**	**n=358**
Feeding time	Regular	26.53	98
	After crying	72.62	260
Burp after feeding	Yes	98.88	354
	No	1.17	4
Pre lacteal feed	Yes	22.34	80
	No	77.65	278
Colostrum	Fed	78.77	282
	Discarded	21.22	76
Birthplace	Private hospital	53.63	192
	Public hospital	37.98	136
	Home	11.17	40
Breastfeeding Initiation	<1 hour	63.68	228
	1-4 hours	13.96	50
	5-24 hours	11.73	42
	>24 hours	10.61	38

Table 1: Breastfeeding characteristics in the study subjects

Parameter	**Subgroup**	**0-4 months**	**5-6 months**	**>6 months**	**Total**	**p-value**
Religion	Hindu	34	52	260	346	0.345
	Muslim	0	4	4	8	
	Other	0	0	4	4	
	Total	34	56	268	358	
Socioeconomic status	Lower	16	28	144	188	**0.01**
	Middle	18	20	120	158	
	Upper	0	8	4	12	
	Total	34	56	268	358	

Occupation	Working	2	0	8	10	0.494
	Non-working	32	56	260	348	
	Total	34	56	268	358	
Education	Illiterate	2	4	16	22	0.988
	Till 8^{th}	10	14	76	100	
	9-12	16	22	114	152	
	Graduate and higher	6	16	62	84	

Table 2: Correlation of sociodemographic variables with exclusive breastfeeding

S. No	Reason	Percentage (%)	Number (n=0)
1.	**Social**	57.7	52
2.	**Mother Health**	15.5	14
3.	**Child Health**	26.6	24

Table 3: Non-exclusive breastfeeding reason in the study subjects

S. No	Complementary feeding characteristics	Percentage (%)	Number (n=0)
1.	**Complimentary food type**		
a)	Dalia	52.51	188
b)	Dal	49.72	178
c)	Khichri	58.10	208
d)	Others	64.80	232
2.	**Duration**		
3.	Before 6 months	10.61	38
4.	At 6 months	42.45	152
5.	After 6 months	46.92	168

Table 4: Complementary feeding characteristics in the study subjects