Research Article

Knowledge regarding breastfeeding and factors associated with its practice among postnatal mothers in central India

Abhay Kumar Choudhary[1], Vishal Bankwar[2], Asha Choudhary[3]

[1]Department of Pediatrics, L.N. Medical College and J.K. Hospital, Bhopal, Madhya Pradesh, India.
[2]Department of Community Medicine, L. N. Medical College and J.K. Hospital, Bhopal, Madhya Pradesh, India.
[3]Senior Obstetrician & Gynaecologist, J.P. District Hospital, Bhopal, Madhya Pradesh, India.
Correspondence to: Vishal Bankwar, E-mail: vishalbankwar@gmail.com

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Abstract

Background: Breastfeeding practices remain poor even though efforts are being made to improve various aspects and promote exclusive breastfeeding. The current study was undertaken to find out knowledge and practice of breastfeeding among lactating mothers.

Objectives: Find out knowledge and practice of breastfeeding and various factors influencing it in postnatal mothers.

Material and Methods: A cross-sectional study was done on lactating mothers attending the postnatal care OPD in a tertiary care center in Bhopal. A pretested structured questionnaire was used to obtain data from 1000 mothers. Information regarding participants' demographics, infant feeding in first 6 months of life, knowledge, and attitude toward breastfeeding was collected.

Results: Exclusive breastfeeding was practiced by only 33% mothers, whereas mixed feeding was found to be common (53%). It was found that age of the mother, education of mother, income of the family, parity, and availing antenatal care services ($p < 0.0001$) were all significantly associated with the practice of breastfeeding.

Conclusion: Exclusive breastfeeding was found to be poor in the study group even though the knowledge regarding various aspects of breastfeeding was not very poor.

KEYWORDS: Breastfeeding, postnatal, knowledge, practice

Introduction

Breastfeeding is a normal way of providing young infants with the nutrients they need for healthy growth and development[1]. Breastfeeding being the first immunization to the newborn and being the first contact with the mother increases psychological bonding between the newborn and the mother.

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Breastfeeding being economical and capable of preventing diseases and allergies is the best nutrition. Breastfeeding is best for gaining weight and reducing chances of infections as compared to top feeds. Children who get mothers' milk grow better with better scholastic performance and have optimal gut development[2].

Breastfeeding is essential for developing countries where malnutrition is prevalent and hygienic conditions are poor. The repeated infection causes diarrhea and recurrent respiratory infections, leading to high infant mortality. In ancient time, breastfeeding was the only source of feeding of newborn, but during industrialization, urbanization and modernization, this practice has gradually declined[3].

Early and exclusive breastfeeding is now recognized as one of the most effective interventions for child survival particularly to address morbidity and mortality related to three

Table 1: Socio-demographic characteristics of mothers (n = 1000)

Variables	Category	Number (%)
Age	Less than 20	98 (9.8)
	20–25	412 (41.2)
	25–30	284 (28.4)
	Above 30	206 (20.6)
Education	Illiterate	96 (9.6)
	Primary	183 (18.3)
	Middle	346 (34.6)
	Higher Secondary	133 (13.3)
	Graduate	242 (24.2)
Income	<1500	340 (34)
	>1500	153 (15.3)
	2000	146 (14.6)
	>2500	361 (36.1)
Type of family	Nuclear	595 (59.5)
	Joint	405 (40.5)
Parity	Primipara	526 (72.6)
	Multipara	474 (27.4)
Type of delivery	Normal	472 (47.2)
	Minor Operation	223 (22.3)
	LSCS	305 (30.5)
Gender of baby	Male	541 (54.1)
	Female	459 (45.9)
ANC Services	Yes	644 (64.4)
	No	356 (35.6)

major conditions, e.g., neonatal infections, diarrhea, and pneumonia. Breast milk is sufficient till 6 months of age after which complimentary feeding is to be given, but breastfeeding should continue till 2 years and beyond[3].

Over the period, there has been a slow but steady increase in early initiation of breastfeeding, especially after launch and operationalization of NRHM. However, there has been no improvement in the status of exclusive breastfeeding for 6 months and complementary feeding (6–9 months). The survey data analysis suggests that introduction of liquids and solid or semi-solid foods often takes place before the recommended age of 6 months. Almost 30% of children start receiving complementary food (CF) at the age of 4–5 months. Similarly, delayed complimentary feeding is also common[3].

The present study was undertaken to collect information on knowledge of breastfeeding in urban slum in postnatal mothers and also to find out factors associated with stopping of breastfeeding and early introduction of complimentary feeding.

Materials and Methods

Type of study: Cross-sectional observational study.

Area of study: J. P. Hospital, Bhopal. There were nursing mothers attending clinic on Tuesday and Friday at Govt. Hospital, Bhopal. The mothers were interrogated for breastfeeding knowledge and practices.

Table 2: Knowledge of mothers regarding breastfeeding (n = 1000)

Variables regarding knowledge of breastfeeding	Knowledge	
	Yes (%)	No (%)
1. Initiation of breastfeeding		
Give colostrum	822 (82.2)	178 (17.8)
Start within 1 h	675 (67.5)	325 (32.5)
Positioning	688 (68.8)	312 (31.2)
Advantages	860 (86)	140 (14)
2. Exclusive breastfeeding		
Duration	591 (59.1)	409 (40.9)
Advantages	502 (50.2)	498 (49.8)
3. Breastfeeding		
Duration	621 (62.1)	379 (37.9)
Frequency	528 (52.8)	472 (47.2)
During illness	466 (46.6)	534 (53.4)
Advantages	764 (76.4)	236 (23.6)
4. Complimentary feeding		
Initiation	623 (62.3)	377 (37.7)
Duration of both	475 (47.5)	525 (52.5)

Study period: January 2014 to June2014, 6 months duration.

Sampling: Data were collected on pretested tool prepared for the purpose of the study. Lactating mothers who delivered and came to OPD at J. P. Hospital during study period for postnatal checkup were interrogated and recorded on designed tool. Variables for which data were collected included age, education, parity, family type, income, type of delivery, gender of the baby, received antenatal services, and feeding practices and knowledge.

Sample size: The calculated sample size based on exclusive breastfeeding rate of 46.8% was 661, considering a large population (infinite) and setting confidence level of 99% and a precision of 5%[4]. Sample size $n = (Z^2 \times P\,(1 - P)/e^2)$, where Z = value from standard normal distribution corresponding to desired confidence level (Z = 1.96 for 95% CI), P is expected true proportion, and e is desired precision (half-desired CI width). Finally, a total of 1000 mothers were interviewed during the study period.

Data collection and analysis: Observations thus gathered were tabulated and discussed in the light of literature, and findings were subjected to statistical analysis. Statistical analysis was done using MS excel ver. 2010 and Epi info ver. 7, and a chi-square test was used to find significance of association for various variables.

Results

The various socio-demographic characteristics of the study participants are shown in [Table 1]. Most of the study participants belong to urban slum area (68.9%) near the hospital in which the study was undertaken. Quite a few mothers were from rural area (24.2%) and most of the participants belonged to Hindu religion (91.8%) as compared to Muslims (6.8%) and others.

Table 3: Practice of breastfeeding and socio-demographic factors (n = 1000)

Variable	Category	Type of feeding			*P* value
		Breastfeeding (%)	Bottle feeding (%)	Mixed (%)	(χ^2)
Age	Less than 20	26	15	57	<0.0001*
	20–25	142	31	239	
	25–30	111	56	117	
	Above 30	51	34	121	
Education	Illiterate	52 ()	4	40	<0.0001*
	Primary	52 ()	28	103	
	Middle	102 ()	43	201	
	Higher secondary	26 ()	31	76	
	Graduate	98 ()	30	114	
Income	<1500	117 ()	34	189	<0.0001*
	1500–2000	77 ()	25	51	
	2000–2500	65	30	51	
	>2500	71	47	243	
Type of family	Nuclear	202	68	325	0.0521
	Joint	128	68	209	
Parity	Primipara	135	60	331	<0.0001
	Multipara	195	76	203	
Type of delivery	Normal	150	74	248	
	Minor operation	85	20	118	0.1091
	LSCS	95	42	168	
Gender of baby	Male	192	69	280	0.18
	Female	138	67	254	
ANC services	Yes	268	81	375	<0.0001
	No	62	55	179	

*Significant at $p < 0.05$

Table 2 shows the knowledge of lactating mothers regarding various aspects of breastfeeding deemed necessary for successful breastfeeding in infants. These include initiation of breastfeeding, exclusive breastfeeding, and the process of breastfeeding and complimentary feeding.

Table 3 highlights the practice of breastfeeding among the study participants and its association with various socio-demographic factors. It was found that age of the mother (χ^2 = 40.501, df = 6, p < 0.0001), education of mother (χ^2 = 40.88, df = 2, p < 0.0001), income of the family (χ^2 =83.052, df = 6, p < 0.0001), parity (χ^2 =,40.88, df= 2, $p < 0.0001$), and availing antenatal care services (χ^2 =28.298, df= 2, p < 0.0001) were all significantly associated with the practice of breastfeeding and influenced use of artificial feeding/bottle feeding in study participants. Bottle feeding (n = 136, 13.6%) is very commonly used by nursing mothers for feeding of infants though mixed feeding is the most common method used (n = 534, 53.4%) and only 33% mothers (n = 330) do exclusive breastfeeding as recommended.

Discussion

The current study was undertaken on lactating mothers. The findings of the study suggest that 67.5% of the women initiated timely breastfeeding. Exclusive breastfeeding was practiced by only 40% women and mixed feeding was more common. The most common reason for starting bottle feeding was that most mothers felt breast milk was inadequate for the mothers. The factors significantly associated with not doing exclusive breastfeeding were age of the mother, education status, income, primipara, and whether the women received antenatal care during pregnancy or not.

The rates are similar with other studies from India. Shafee et al. in their study in South India found exclusive breastfeeding rate of only 36% and also found the knowledge and practice to be significantly associated with level of literacy. Many (60%) practiced colostrum feeding and 46% gave pre-lacteal feeds. Only 43% mothers practiced exclusive breastfeeding (EBF)[5]. In another such study by Harnagle et al. in Jabalpur area, exclusive breastfeeding rate was found to be 49%. In 75.23% lactating mothers, breast milk was initially given as the first feed, weaning among 69 children started mostly between 4 and 6 months.[6].

In study of factors associated with breastfeeding in Jordan by Khassawneh et al., the type of feeding was associated with mothers' level of education and family income. Women with higher education and higher income were less likely to breastfeed. Similarly, employed mothers, mothers with lower number of children, and those delivered by cesarean were less likely to fully breastfeed. Full breastfeeding was reported by 58.3%, mixed feeding was reported by 30.3%, and infant

formula feeding was reported by 11.4%. Almost one-third of the full breastfeeding group did so for 6–12 months, and almost two-thirds did continue breastfeeding for more than 1 year. Employed women were more likely not to practice full breastfeeding compared to unemployed women (odds ratio 3.34, 95% CI 1.60, 6.98), and women who had cesarean delivery were more likely not to practice full breastfeeding compared to those who had vaginal delivery (odds ratio 2.36, 95% CI 1.17, 4.78)[7].

In another study in Tamil Nadu in India by Radhakrishnan et al., only 99 (34%) children were exclusively breastfed for 6 months. The majority of women (60.5%) initiated breastfeeding within half an hour after delivery. Various demographic factors such as the education of the mother, type of delivery, type of family, occupation, number of children, monthly income, family size, age at marriage, and religion had a direct influence on exclusive breastfeeding, which in turn influenced the weight of the baby and immune status of the child. Most of the mothers (44.7%) inferred that the main reason for giving bottle feed is because of inadequate breast milk secretion[8].

In the study, knowledge regarding initiation of breastfeeding was found to be good in 82.2 % of mthers [Table 2]. The study by Afrose et al. showed that, overall the level of knowledge regarding breastfeeding is very poor (88%) among the study subjects. Most of the respondents have very poor knowledge regarding advantages of exclusive breastfeeding (89%) and breastfeeding (100%). In contrast, a majority have good knowledge on duration of exclusive breastfeeding (74%) and breastfeeding (66%). No significant association was found between the knowledge score of breastfeeding with remaining socio-demographic variables such as age, marital status, family income, and expenditure. Education is significantly ($p < 0.001$) associated with a higher total knowledge score of breastfeeding. Women with secondary level of education had a significantly higher ($p < 0.001$) level of total knowledge score than other categories (illiterate, primary, and higher secondary) of education[9]. Similar findings regarding the knowledge have been reported by other authors[10,11]. A study in Tanzania by Ampeire found that majority of the respondents 150 (73.8%) were knowledgeable about exclusive breastfeeding[12].

Antenatal care services were found to have a positive impact on breastfeeding, resulting in better knowledge and better practices in women who received these services ($p < 0.001$). Though the information provided may vary significantly. In a study by Nigam et al. on antenatal mothers, out of total 200 antenatal beneficiaries, 163 (81.5%) had knowledge about benefits of exclusive breastfeeding, 37 (18.5%) answered "don't know" ($p > 0.05$ not significant statistically). Out of total 200 antenatal beneficiaries, 61 (30.5%) were informed about exclusive breastfeeding and 139 (69.5%) were not informed, ($p < 0.05$ significant statistically)[13].

Conclusion

Overall, the knowledge and practice of breastfeeding was found to be poor among lactating mothers. Despite the fact that many children will be benefitted if existing knowledge is properly used and utilized; still the results are found to be poor. So, efforts to improve breastfeeding need to be stepped up using all necessary tools including mass media to have the desired impact and promote breastfeeding.

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