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Original Research Article

Identification of factors determining the initiation of breastfeeding in postnatal women in a tertiary care centre: an observational study

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ABSTRACT

Background: The WHO recommends that mothers worldwide to initiate breastfeeding within an hour of delivery to achieve optimal growth, development and health but the breastfeeding rates remain far below the recommended standards. The aim of this study was to find the prevalence of delay in initiation of breast feeding, to identify various factors which determine the initiation of breastfeeding and to correlate their association with delayed onset of breast feeding.

Methods: Hundred and thirty six postnatal women, who delivered in Santosh Medical College and Hospital, Ghaziabad, were recruited in the study. They were interviewed after their informed consent using a pretested structured questionnaire. Socio-demographic and obstetric factors were compared between subjects who initiated breast feeding in less than and more than 1 hours. Frequencies were calculated for different variables. Data was statistically analyzed and p value of <0.05 was taken significant.

Results: The prevalence of delay in initiation of breast feeding in our study was found to be 74.2% (n=101). The mean time of initiation of breast feeding was 18.43 hours. Significant association (p <0.05) was found in various sociodemographic, obstetrical and social factors.

Conclusions: Identifying mothers at risk of delayed breastfeeding initiation should be the target for breastfeeding promotion during prenatal, antenatal as well as postnatal period. Public health officials and health care providers should consider interventions to promote and support early initiation of breast feeding.

Keywords: Breast feeding, Early initiation of breast feeding, Postnatal, Prelacteal feed

INTRODUCTION

The World Health Organization (WHO) recommends initiation of breastfeeding within an hour of delivery.¹ Early initiation is beneficial to the newborn as colostrum boosts the immunological system, supports growth and development, facilitates bonding between mother and baby, stimulates breast milk production, reduces the incidence of post-partum haemorrhage and establishes successful and longer breastfeeding duration.²⁻⁴ Delaying initiation of breastfeeding is associated with a high incidence of early neonatal mortality and morbidity.^{2,5,6}

According to UNICEF, low to middle income countries (LMICs) are disproportionately affected by suboptimal breastfeeding.⁷ An analysis of DHS (Demographic Health Survey) data from 57 LMICs published in 2018 revealed that only 39% of children were breastfed within an hour of delivery (range by region of 31-60%).⁸ An analysis by NFHS 4 (National Family and Health Survey 4, 2015-16) has shown that early initiation of breastfeeding in India is 41.5%.⁹ Given this negative trend, it is important to explore the factors associated with delay in initiation of breast feeding which can help to strategize ways and methods to encourage early initiation of breast feeding.

The aim of this study was to find the prevalence of delay in initiation of breast feeding. To identify various factors which determine the initiation of breast feeding. To correlate their association with delayed onset of breast feeding.

METHODS

The study was an observational study conducted in Ghaziabad, Uttar Pradesh, India. After taking ethical clearance from Ethical committee of the Institution, the study was conducted over a period of 3 months from June 2018 to August 2018. Hundred and thirty six women, who delivered in Santosh Medical College and Hospital, Ghaziabad, were recruited in the study. The subjects were interviewed after their informed consent using a pretested structured questionnaire which consisted of sociodemographic and obstetric factors. Sociodemographic factors included age, parity, and education, and residence, type of family and employment status. Obstetric factors were further divided into antenatal, intranatal and postnatal factors. Antenatal factors included questions regarding antenatal supervision, antenatal counseling, any complications and gestation at delivery. Intranatal factors included mode of delivery, any complications, use, of sedation or anaesthesia postnatal factors included the traditions, prelacteal feeds, and sex of the baby. All factors were studied in relation to time of first breast feeding after birth which was recorded in minutes. They were then grouped in who initiated breast feeding in less or more than one hour after delivery. Exclusion criteria were still births and congenital malformations.

Statistical analysis

The data was collected and tabulated. Analysis was done using Statistical Package for Social Sciences (SPSS)

version 21.0. Frequencies were calculated for different variables. Chi square test, student t-test and Mann-Whitney U test was done where required and p value of <0.05 was taken to be statistically significant.

RESULTS

Total of 136 subjects were recruited out of which 2 had still births and so were not included in the study. The mean age of the subjects was 25.7 ± 4.4 years. The mean time of first breast feeding was 18.43 hours (Figure 1). Breastfeeding was a common practice as 99.2% breastfed the newborns, but only 24.6% (n=33) initiated breast feeding early.

Sociodemographic factors of subjects and their frequency distribution are tabulated in Table 1. Age more than 30 years, multiparity, education status of the subject and family members. Rural residence and joint family were factors which were significantly associated with early breast feeding (Table 1).

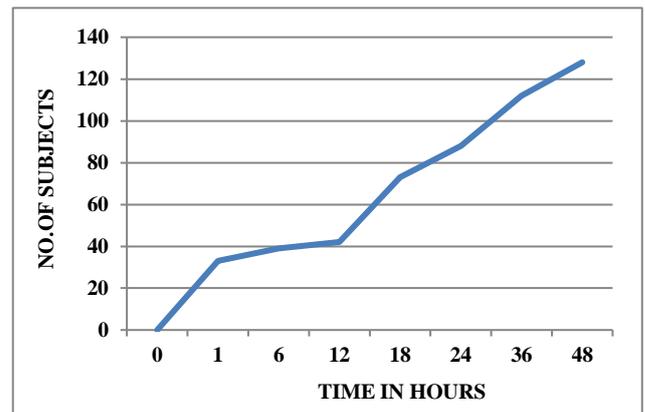


Figure 1: Number of subjects and initiation of breast feeding (hours).

Table 1: Correlation of sociodemographic factors with initiation of breast feeding.

Variable	<1hour (n=33)	>1hour (n=101)	p value	OR
Age	<30 years	13	0.05	2.2
	>30 years	20		
Parity	Primi	11	0.05	1.2
	Multi	22		
Education	Illiterate	4	0.008	0.21
	School	7		
	UG	10		
Education of mother in law	PG	12	0.03	0.2
	Educated	23		
	Uneducated	10		
Occupation	Employed	11	0.01	3.3
	Unemployed	22		
Family	Nuclear	9	0.03	2.7
	Joint	24		
Residence	Urban	13	0.05	0.4
	Rural	20		

Table 2: Frequency distribution of antenatal factors (n=134).

Variable		<1 hour (n=33)	>1 hour (n=101)	P value	OR
Antenatal supervision	Yes	24	88	0.05	0.4
	No	9	13		
Counselling	Doctor	15	10	<0.0001	13.5
	Nurse	7	3		
	Family	5	44		
	Friends	3	30		
	Media	3	14		
Pregnancy complications	Yes	4	38	0.009	0.22
	No	29	63		
Gestational age at delay	<37 weeks	5	18	0.72	1.2
	>37 weeks	28	83		

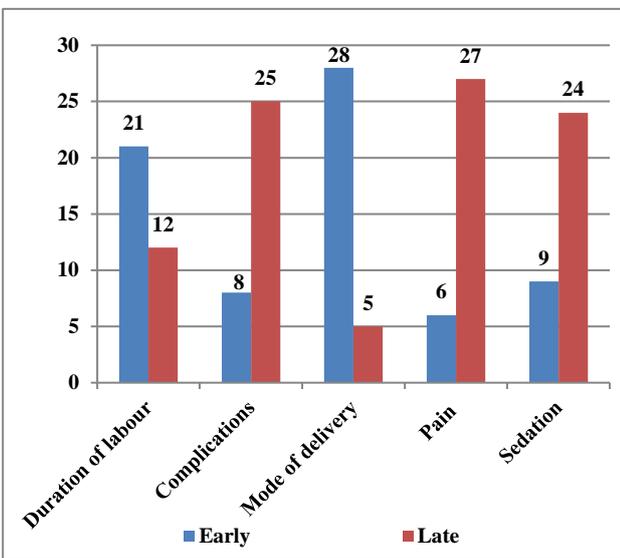


Figure 2: Frequency distribution of intranatal factors.

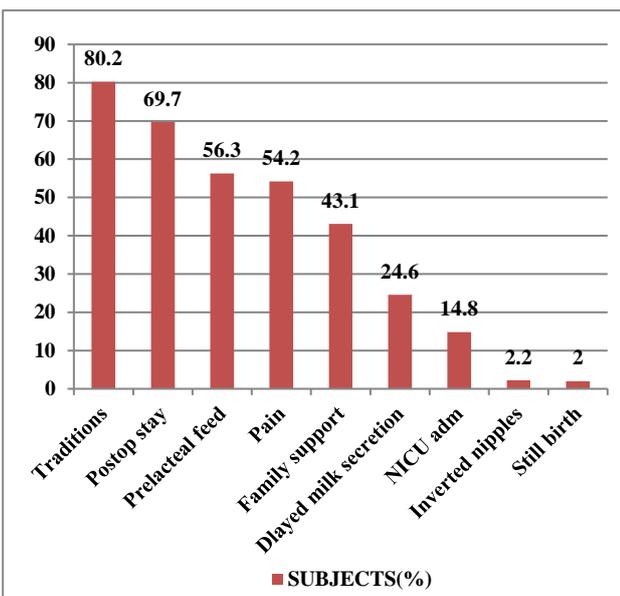


Figure 3: Percentage distribution of postnatal factors.

Out of the 33 women who practiced early initiation, 45.4% (n=15) and 21.2% (n=7) of mothers were counselled by doctors and nurses respectively (Figure 2) which depicts the importance of proper antenatal counselling by a trained health personnel.

In the present study labour, more than 12hours, cesarean delivery, presence of intranatal and postnatal complications, presence of pain and administration of sedation were factors which were significantly associated (p<0.05) with delayed initiation of breast feeding (Figure 2 and Figure 3).

Factors which led to delay in initiation of feeding were post operative stay and pain. Other significant factors were customs of not breast feeding, prelacteal feeds, sex of the baby not coinciding with expectation of mother and NICU admission of the newborn.

DISCUSSION

Breastfeeding decisions and practices are influenced by multiple factors, including knowledge, attitudes, and beliefs, as well as sociocultural and physiological factors. The aim of this study was to evaluate the prevalence and factors associated with delay in initiation of breastfeeding. The prevalence of delay in initiation of breastfeeding in our study was 74.2%. We found that age more than 30 years, multiparity, education status of both the subject and family members, rural residence, joint family and unemployed status were significantly associated with early initiation of breast feeding.

Despite the recommendations by infant and young child feeding, Government of India and the WHO, delayed initiation of breast feeding was quite high in the study which is comparable to studies in LMICs.¹¹⁻¹⁴ The reason for which was found to be that the colostrum was thought to be unworthy of giving to the baby Figure 5. According to a study conducted in western Nepal, a significant number of mothers gave colostrum as the first meal to 86.2% babies, while the remaining 14% babies were

given a fluid other than breast milk as their first feed.¹⁵ Various family rituals and myths were found to be responsible as in our study.¹¹⁻¹⁴ Another reason for the delay was found to be unpopularity of the early skin to skin contact of mother with newborn as recommended by WHO due to separation of the mother-baby pair for routine post-delivery procedures.

Delayed initiation in younger women and primiparous women reflect lack of knowledge and experience on the importance of timely initiation which tends to improve with successive pregnancies. Also concern that their milk may not be enough for baby needs, formula feeds were given to newborn making the newborn vulnerable to various infections.

Urban residence and employed subjects were found to practice delayed initiation. This was in contrast to other studies where rural subjects were more prone to practice delayed breast feeding.^{13,14} This was mainly because of the influence by the marketing tactics used by companies selling “enhanced” infant milk formulas.

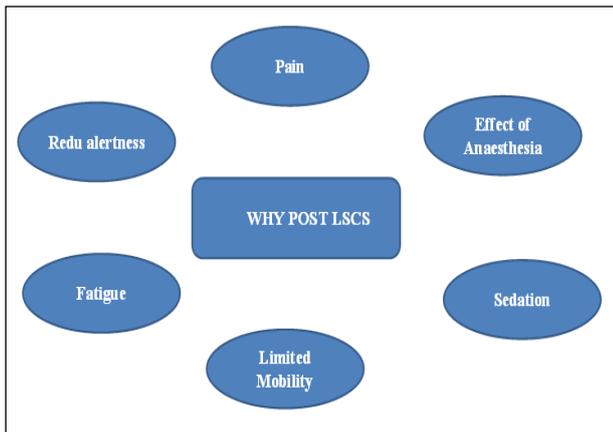


Figure 4: Effects of anaesthesia.

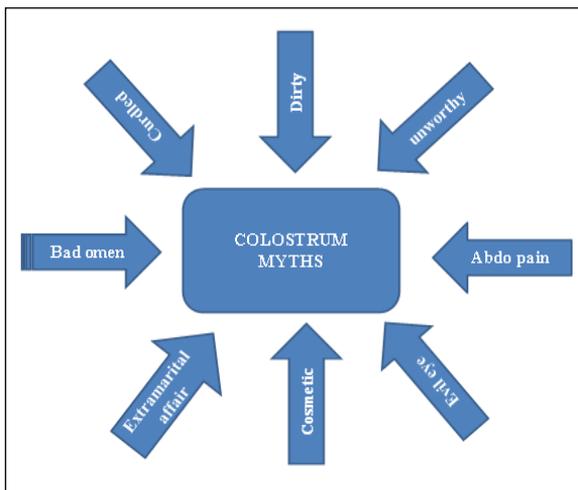
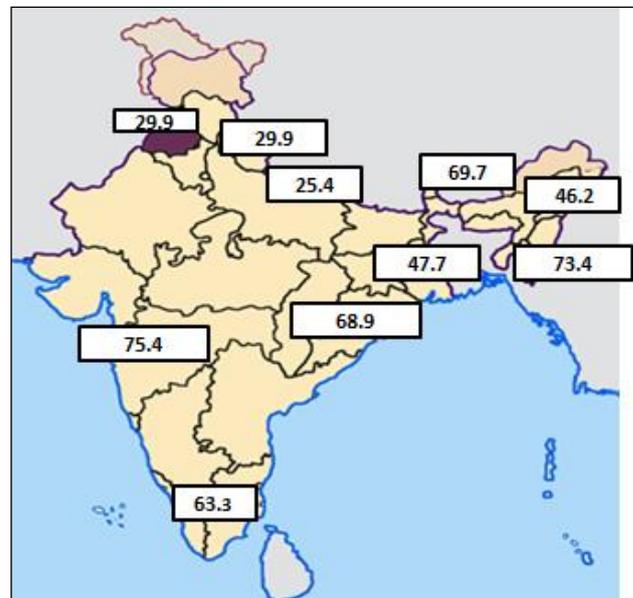


Figure 5: Myths regarding colostrums.

It can be established in the present study that even in institutional deliveries there is gross lack of knowledge regarding the importance of early initiation of breast feeding which is supported in multiple studies.^{12,13,16} Lack of antenatal counseling by a health personnel was found to be significantly associated with delay in initiation of breast feeding in present study.

Similar to other studies, this study also found that subjects with duration of labour more than 12 hours, presence of intranatal and postnatal complications, and a caesarean delivery were also at risk of not initiating breastfeeding early.¹⁶ Effect of anaesthesia, caesarean procedure, reduced maternal alertness and inadequate maternal skills to initiate breastfeeding are some of the reasons for negative association; with early initiation of breastfeeding (Figure 4). Considering the increasing rates of caesarean delivery globally, it is necessary to encourage and support early initiation of breastfeeding in such women.

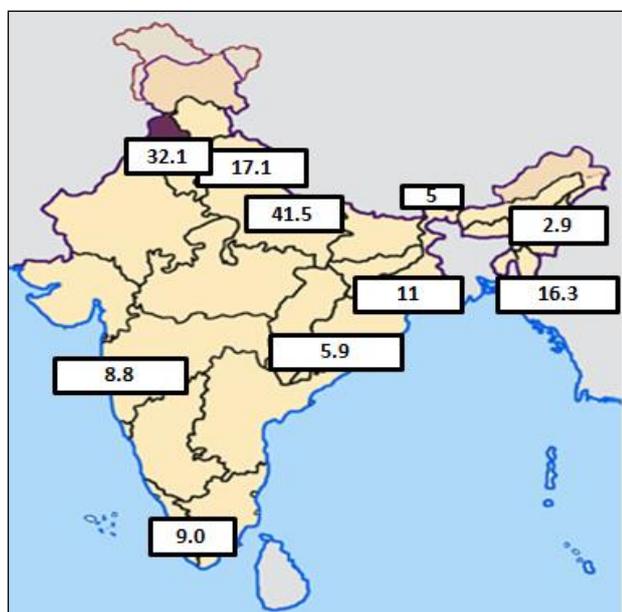
Traditions and customs of not feeding with breast, giving prelacteal feeds were the commonest postnatal factors that proved obstacles in early initiation of breast feeding. Apart from the cow milk and honey which were the commonest prelacteal feed given to the newborns, butter, glucose solution and formula milk were also given. This was found in almost all the studies done in LMICs.¹¹⁻¹³ Various myths and family rituals are of great concern and should be discouraged as they cause lactation failure resulting in high neonatal morbidity and mortality (Figure 5).



The percentage of children that are breastfed within one hour of birth is very low in Uttar Pradesh (25%), the only states in which more than two-thirds of children are breastfed within one hour of birth are Goa, Mizoram, Sikkim, and Odisha.

Figure 6: Early initiation in states of India percentage.

According to the NFHS 4 (2015-16) percentage of children that are breastfed within one hour of birth is barely 42%, but over 81% of newborns begin breast feeding within one day. The early initiation is very low in Uttar Pradesh (25%), the only states in which more than two-thirds of children are breastfed within one hour of birth are Goa, Mizoram, Sikkim, and Odisha (Figure 6). Twenty-one percent of children received a prelacteal feed which ranged from a minimum of 3 percent of children in Tripura to a maximum of 42 percent of children in Uttar Pradesh (Figure 7). Children whose delivery was assisted by health personnel (43%) or who were born at a health facility (43%) were more likely to start breastfeeding within one hour of birth than other children.⁹ Thus NFHS 4 supports this finding that education status, family traditions and counseling by a health personnel are three most significant factors which affect the time of initiation of breast feeding.



Prelacteal feeding ranges from a minimum of 3 percent of children in Tripura to a maximum of 42 percent of children in UP.

Figure 7: Prelacteal feed percentage in India.

CONCLUSION

There is a great lacuna in the knowledge, attitude practices and belief of mothers regarding early initiation of breast feeding even in institutional deliveries. Education and antenatal counselling can help in breaking down barriers like family rituals and myths in establishing breast feeding early. Involvement of family is a must and the whole family should be counselled as a unit. Public health officials and health care providers should consider interventions to promote and support early initiation of breast feeding. Last but not the least, various policies made by Health Organisations like WHO UNICEF, etc, may seem very lucrative but how far they are being implemented needs to be thought about and investigated further.

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