

## DESCRIPTIVE CROSS-SECTIONAL STUDY ON RATE OF EARLY BREASTFEEDING INITIATION AMONG MOTHERS DELIVERED AT TERTIARY CARE MATERNITY CENTERS

K.Narahari<sup>1</sup>, S.Venumadhav<sup>1</sup>, S Satish Kumar<sup>1</sup>, M Sreeram Reddy<sup>1</sup>

<sup>1</sup>Department of Paediatrics, Sri Krishna Childrens Hospital, Telangana, India

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Corresponding Author:

**Dr. M Sreeram Reddy**

Email: ops.skch@gmail.com

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### Abstract

**Background:** The first step toward a child's future health is breastfeeding. The study's objective was to calculate the percentage of early breastfeeding beginning at a tertiary care hospital for mothers and children and reasons for delayed initiation. **Materials and Methods:** It was a descriptive cross-sectional study conducted at tertiary care centre which is an apex institute for maternal and child testing. Convenience sampling technique was used for collecting the sample size. All postnatal mothers who delivered in the hospital (vaginal & cesarean delivery) during the study period were included in the study. Considering the prevalence of EIBF to be 14% with 5% absolute precision and 10% nonresponse rate, the sample size was 220. The study was conducted for period of 3 months. Women who gave birth in the institute were included in the study. The sample consisted of mothers who had a live infant at the time of data collection. Mothers who declined to provide permission were not included. **Result:** Early initiation was seen in 71% of mothers while 29% had delayed initiation. The most common reason for delayed initiation was baby in NICU after delivery (50%), followed by inadequate breast feeding practices (25%). Most common age group was 20-24 years (63%), most of the mothers were hindu in religion and 85% had higher secondary education and 83% were housewife. 81% of females belonged to nuclear family. Among clinical variables 50% already had one child but 84% had no previous experience of breast feeding. 84% went to regular ante-natal follow up and 97% had counselling of breastfeeding. **Conclusion:** Although it can yet be enhanced, the setting's rate of early breastfeeding initiation is quite good. The majority of health professionals who provide prenatal counseling are nurses, although there is room for improvement in the prenatal breast assessment process. Their ability to manage lactation can be trained.

## INTRODUCTION

Early initiation of breastfeeding (EIBF) is defined as 'provision of mothers' breast milk to infants within the first hour of birth and ensures that the newborn receives colostrum. EIBF is essential because it guarantees that the infant will receive colostrum, a yellow liquid that serves as both the newborn's first meal and its first vaccination. Colostrum is a vital source of nutrition and antibodies.<sup>[1]</sup>

EIBF offers a special chance for the infants to get the energy and balanced diet they need for healthy growth and development as soon as possible. In a similar vein, it fosters the mother-child relationship, which promotes cognitive development. Additionally, it lowers the chance of obesity and non-communicable diseases in later life. The first step to the path of a healthy future for a child is breastfeeding.<sup>[2]</sup> Breast-feeding is the cornerstone of the

healthy development of the child and it is the foundation for the development of the country.<sup>[3]</sup> WHO considers it as a high-impact, cost-effective interventions for improving newborn health. Breast-milk is the only food with is ideal to meet the nutritional needs of infants, which is healthy, clean and safe and is easily accessible everywhere. Early initiation of breast-feeding is starting breast-feeding within the first hour of birth of the baby.<sup>[4]</sup> There will be potentially fatal outcomes if not followed that starting breastfeeding at a young age will save 20% of neonatal deaths. Considering its significance, breastfeeding has a direct or indirect relationship to eight Sustainable Development Goals (SDGs): 1, 5, 8, 10, and 12. The Indian government views enhancing breastfeeding patterns as a critical strategy for promoting the healthy survival of neonates. While the institutional delivery rate in India

might reach 79%, the early commencement of breastfeeding rate is only 44.6%.<sup>[5,6]</sup>

It is anticipated that giving birth in a medical facility increases the likelihood that a baby may begin breastfeeding before it is ready. Interestingly, only 42.6% of babies in India were nursed within an hour of birth, despite the fact that 7.9% of babies were delivered in institutions.<sup>[7]</sup> As a result, it has been established that a number of maternal and facility-level factors affect EIBF. The Baby-friendly Hospital Initiative (BFHI) strategy, one of which is "to facilitate immediate and uninterrupted skin-to-skin contact and support mothers to initiate breastfeeding as soon as possible after birth," is something that our hospital is planning to implement. EIBF at the facility level can be emphasized by recognizing these variables and taking early action.<sup>[8]</sup>

The purpose of the current study was to calculate the percentage of early breastfeeding beginning at a tertiary care hospital for mothers and children and to find out the determinants of delayed initiation of breastfeeding among postnatal mothers.

## MATERIALS AND METHODS

It was a descriptive cross-sectional study conducted at tertiary care centre which is an apex institute for maternal and child testing. Convenience sampling technique was used for collecting the sample size. All postnatal mothers who delivered in the hospital (vaginal & cesarean delivery during the study period) were included in the study. Considering the prevalence of EIBF to be 14%<sup>9</sup> with 5% absolute precision and 10% nonresponse rate, the sample size was 220. The study was conducted for period of 3 months.

Women who gave birth in the institute were included in the study. The sample consisted of mothers who had a live infant at the time of data collection. Mothers who declined to provide permission were not included.

### Methodology

After building a strong relationship with the postnatal moms and providing a brief self-explanation of the study, the investigator went on to describe the goal of the study and distribute participant information sheets. The data on the variables were gathered using a checklist and an organized, validated questionnaire. Data on the clinical factors were gathered through

record review. Demographic factors, clinical variables on mothers like Obstetric score, parity, previous experience with breast feeding, antenatal check-up, place of antenatal check-up, received antenatal counselling regarding breast feeding, breast examination during antenatal period, complications associated with present pregnancy, present pregnancy planning, type of present delivery, complications during pregnancy and delivery. Neonatal variables were also studied.

Ethical clearance was obtained from institutional ethics committee.

### Statistical Analysis

Recorded observation were updated in Microsoft excel sheet and later on exported to Epi info 7 software. For categorical variables, descriptive statistics include frequencies and proportions; for continuous variables, they include the median and interquartile range (IQR).

## RESULTS

As per [Table 1] socio-demographic and maternal variables were studied. Most common age group was 20-24 years (63%), most of the mothers were hindu in religion and 85% had higher secondary education and 83% were housewife. 81% of females belonged to nuclear family. Among clinical variables 50% already had one child but 84% had no previous experience of breast feeding. 84% went to regular ante-natal follow up and 97% had counselling of breastfeeding. In 93% no breast examination was done the reason could be most of the females were attended by nurse first.

As per [Table 2] 85% of neonates belonged to weight range between 2.5-3.5 and 90% were full term normal birth. Median time for initiation of breast feeding was 49 minutes. Most of the deliveries were caesarean section 82% and complications were present during pregnancy and delivery.

As per [Table 3] in the present study early initiation was seen in 71% of mothers while 29% had delayed initiation. The most common reason for delayed initiation was baby in NICU after delivery (50%), followed by inadequate breast feeding practices (25%). Exhaustion after delivery, late wearing of anesthetic effect and delay in episiotomy sutures were other reasons.

**Table 1: Demographic and Maternal variables (N=220)**

Variables	N	%
Socio-demographic variables of mother		
Age- 20-24 years	139	63
Religion- Hindu	167	76
Education of mother- higher secondary	187	85
Occupation of mother- housewife	185	83
Monthly income -BPL	69	31
Type of family-nuclear	178	81
Exposure to mass media- newspaper, TV and internet	121	55
Clinical variables of mother		
Obstetric score- primigravida	192	87
Parity- one child	110	50

Previous experience with breast-feeding-no	186	84
Regular antenatal checkup- yes	170	100.0
Hospital at which antenatal check-up conducted- government	210	95
Antenatal counselling regarding breast feeding-yes	213	97
Month of pregnancy in which antenatal counselling regarding breastfeeding was received-second trimester	153	67
Antenatal counselling regarding breastfeeding given by- nurse	165	74
Breast examination-no	205	93

**Table 2: Neonatal Variables and Pregnancy complications (N=220)**

Variables	N	%
Type of present delivery- CS	180	82
Complications associated with present pregnancy- yes	142	65
Complications associated with present delivery-yes	89	40
Neonatal variables		
Birth weight-2.5-3.5 kg	187	85
Period of gestation at delivery-FT	197	90
Median time for initiation of BF after delivery (IQR)	49 (46.3-55) min	

**Table 3: Reasons for delay for early initiation of Breast feeding (N=220)**

Variables	Number	%
Early initiation	156	71
Delayed initiation	64	29
Reasons of delayed initiation		
Baby in NICU after delivery	32	50
In adequate breast feeding	16	25
Exhaustion after delivery	8	12.5
Late wearing of anesthetic effect	4	6.5
Transfer time from OT to ward	2	4
Uncomfortable breast feeding position after surgery	1	1
Delay in episiotomy suture	1	1

## DISCUSSION

This study found that the rate of early initiation of breastfeeding in the study setting was 71% (95% CI 66.4 to 84.2). The WHO reported that during 2010-2018, the rate of early initiation of breastfeeding in 57 LMICs was 51.9% (51.6–52.2%).<sup>7</sup> Another study reported 80.9% as the early initiation rate, very close to the present study findings, from a tertiary care hospital in Odisha.<sup>10</sup>

Besides, the prevalence of EIBF observed in our study was compared to studies done in other states such as Maharashtra (45.2%), Andhra Pradesh (75.6%), and Tamil Nadu (97.5%) but higher than Madhya Pradesh (38.6%), Nagpur and Odisha (36.4%), and Bihar (24.86 percentage) This deviations of the rate within nation might be owing to study setting, sampling procedures in other studies, and possible effects from cultural factors. Similar cross-sectional studies done outside India, in Africa, Central America, Nepal, and Bangladesh showed higher prevalence of EIBF ranging from 47.3% to 80% while results from Uganda, Nigeria, and Northwest Romania showed lower EIBF rate (range, 19.7%–34.7%) than our study findings.<sup>[2,3,8]</sup>

In this study, 64 participants (29%) reported a delay, according to an Odisha study, 86.4% of children's delays in starting were caused by their illness following delivery.<sup>10</sup> According to a South Indian study, the reasons for the delay in initiation were longer times for the baby to be transferred to the mother (56.5%) and the baby being moved to the intensive care unit (78.7%).<sup>[11]</sup>

In this study, the median time to start breastfeeding was 49 minutes (IQR 46.25 to 55 minutes). The median time to start breastfeeding was found to be 90 minutes (IQR 30 to 180 minutes) in a Puducherry study.<sup>[12]</sup> According to a study, 68.33% of study participants got breastfeeding knowledge from healthcare professionals.<sup>[13]</sup> In Uttar Pradesh, prenatal counseling has reportedly been shown to be beneficial for promoting early breastfeeding initiation. The study revealed that the moms who got both prenatal and postnatal counseling had the highest rate of early initiation (65.4%), whereas the mothers who received only prenatal counseling had 44.9% and the mothers who received postnatal support alone had 50%.<sup>[13]</sup> An RCT with urban Indian women found that the experimental group's early beginning rate was considerably greater when they received breastfeeding counseling from a qualified individual.<sup>[14]</sup> Better early initiation rates in the experimental group were observed when lactation counseling was provided by qualified lactation counsellors, according to another study.<sup>[15]</sup> Based on NFHS-4 data, Sharma reported that 91.86% of pregnancies are planned. According to a Chennai research, the CS rate was 58.33%.<sup>[14]</sup> A different study found that 6.6% of premature deliveries occurred.

The most common complication during delivery was preterm labour (17%) and 0.3% of them had other complications such as retained placenta and 41.5% had more than one complication. A study by Hobbs reported 21.88% study subjects had delivery complications causing delay in initiation.<sup>[15]</sup>

This study has few limitations there was no comparison group, so the factors causing the delay could not be established only frequency updated but relationship couldn't be established. Another limitation was, the study setting was a government hospital, and the situation in the private hospitals could not be evaluated by this study.

## CONCLUSION

The findings indicate that while the majority of the women received their prenatal care at government hospitals, there is still a lack of appropriate prenatal counselling regarding breastfeeding. By receiving lactation management training, nurses can become even more empowered to provide antenatal breastfeeding instruction and postnatal breastfeeding support. They can also be used in the prenatal period for breast examinations.

The study's findings indicate that although the incidence of early breastfeeding beginning in the context is there is still room for improvement. Additional analytical designs to determine the variables that are relevant and the cause-effect linkages for delayed initiation. It is also necessary to research the period of successful milk production setup.

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