

Breastfeeding-related problems in primigravida mothers at the time of hospital discharge from a tertiary care hospital

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ABSTRACT

Background: Breastfeeding-related problems are common in primigravida mothers. There is a lacuna in the knowledge about these problems in Indian population. **Objective:** The present study is undertaken to study the prevalence of breastfeeding-related problems in the first-time mothers in a tertiary care hospital at the time of discharge. **Methods:** Consecutive primigravida mothers, who delivered term babies, were interviewed at the time of hospital discharge about breastfeeding-related problems based on a validated questionnaire. The pre-determined predictors were educational status of mother, mode of delivery, and prior knowledge about breastfeeding. **Results:** Between March 2015 and June 2015, 171 mothers were interviewed. The following were demographic profile of mothers: Average age: 24 years, education above matriculation: 55%, and vaginal delivery: 70%. The common problems were pain while feeding (n=50, 29%), improper latching (n=20, 12%), and feeling of inadequate milk (n=29, 17%). Cesarean section was associated with lower confidence levels for breastfeeding (odds ratio [OR] 2.68 [1.04-6.91], p=0.041), delayed onset of first breastfeed (OR 33.4 [12.67-88], p=0.0001), and feeling of inadequacy of breast milk quantity (OR 3.76 [1.64-8.58], p=0.001). Illiterate mothers were at higher risk of having these problems. Prior knowledge about breastfeeding was associated with fewer problems. **Conclusion:** The study presents the existing problems related to breastfeeding at the time of discharge from a tertiary care hospital.

Key words: Breastfeeding problems, Hospital discharge, Primigravida mothers

Breastfeeding is recommended as the optimal choice of infant nutrition until 6 months of age as per global health standards, and its exclusivity until 6 months is associated with reduction in mortality, better immunological response to infections, prevention of obesity, and higher intelligence quotient [1,2]. Despite this, the rates of exclusive breastfeeding at 6 months are dismally low at 54.9% as per the National Family Health Survey-4 [3].

While breastfeeding is both nutritious and natural, first-time mothers often face difficulty in the establishment of breastfeeding due to multiple issues. It is essential that breastfeeding be monitored for the initial 72–96 h since lactation difficulties have been observed in mother-infant dyads even in well-motivated mothers who receive lactation counseling [4]. The difficulties can range from improper feeding techniques to specific problems arising in the mother such as sore or painful nipples, plugged ducts, breast engorgement, or mastitis. Besides, it is known fact that early observation of breastfeeding techniques can prevent future problems related to feeding [5].

Most of the studies on neonatal nutrition have focused on infant feeding issues of the preterm and very low birth weight infants, with a paucity of literature on breastfeeding issues related to term mature babies [6]. Moreover, these issues are often

underrated among the health-care workers and only few Indian studies have specifically looked into these issues [7]. Often, it is presumed that lactation counseling and assistance provided to mothers during their hospital stay are adequate for sorting out these problems, but this is often far from reality [8]. Since the problems were more likely to be encountered in the first-time mothers, this study was conducted to assess breastfeeding-related difficulties faced by primigravida mothers at the time of hospital discharge from a tertiary care hospital.

METHODS

The study was conducted in the postnatal wards of a tertiary care service hospital from March 2015 to June 2015. The unit caters for approximately 2500 deliveries annually. The mother-infant dyads are regularly supervised for breastfeeding-related issues regularly by a team of residents and faculties from the departments of obstetrics and pediatrics. The nursing staffs monitored the mother-infant dyads for these issues and were on 8-h duty shifts. There were no specific lactation counselors. The study was approved by the institutional ethics committee. The informed consent was obtained from all participating mothers.

Primigravida mothers, who were booked at this hospital and delivered term babies, were included in the study. The following were excluded: Mothers having medical or obstetric complications, mother-baby dyads wherein breastfeeding was contraindicated, and babies requiring admission in the NICU or having congenital malformations.

The participant mothers, at the time of hospital discharge, were interviewed and encouraged to fill a questionnaire-based pro forma which was given to them. The pro forma consisted of basic demographic information and included a detailed questionnaire encompassing various issues related to breastfeeding (sensitive nipples, cracked nipples, mastitis, latching, discharge, and lump). This was done in a simple yes/no format. The questions related to the problems of breastfeeding were arranged randomly, and care was taken to ensure that the answer to one question would not bias the next one. Some questions were left open ended wherein the participants were encouraged to describe their understanding of exclusivity of breastfeeding, other issues not covered in the questionnaire, and opinion on how the breastfeeding experience could have been improved during hospital stay. The pro forma was validated by the faculties of the department and was translated in local vernacular language. All the questionnaires to the mothers were administered personally by the first author, who also assisted the illiterate mothers in filling them appropriately.

The problems assessed by questionnaire were evaluated with respect to the putative predictors for these, namely, educational status of the mother, mode of delivery, prior knowledge, and training about breastfeeding.

Based on a previous study on the prevalence of problems related to breastfeeding (19.5%), the sample size calculated for this descriptive study was 171 [9]. The collected data were recorded in a Microsoft® Excel worksheet and analyzed using SPSS 15.0 package. Descriptive statistics used included frequencies, percentages, and measures of central tendency. Continuous data were measured using t-test, and categorical data were compared using Chi-square test. A $p < 0.05$ was considered statistically significant.

RESULTS

Of 540 deliveries conducted during the study period, 171 mothers were included in the study (Fig. 1). The baseline demographic variables of the mothers and the infants are depicted in Table 1.

Majority of the mothers complained of experiencing “any pain” while feeding ($n=50$, 29%). Most of these ($n=30$) were related to soreness of the nipple, cracked nipple, and feeling of heightened sensitivity. Of these, 12 mothers (7%) had witnessed hardness or lump either in the area of breast or around areola during the course of hospital stay; two of these (1.2%) had associated pus discharge which required specific therapy. The other major concern faced by mothers was difficulties in the technique of breastfeeding ($n=20$, 12%); majority of them were related to latching. Although most of them were tackled during the hospital stay, during self-reporting of issues at the time of discharge, two mothers felt the additional need for explanation on

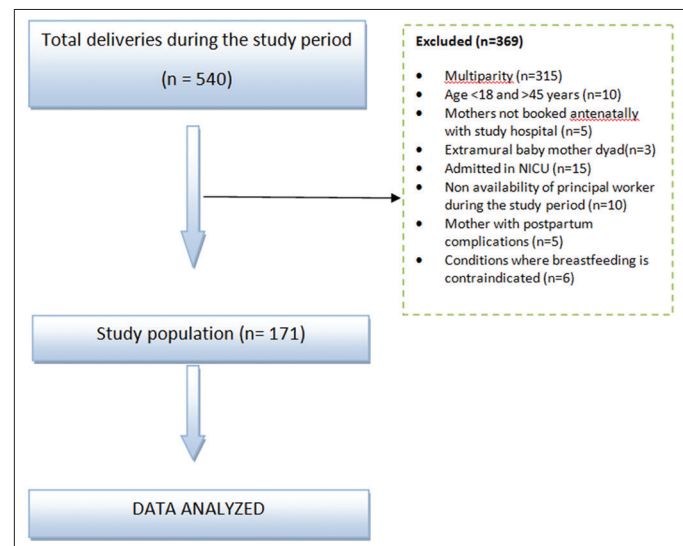


Figure 1: Study flow chart

Table 1: The distribution of demographic characteristics of the study population

Maternal characteristics*	n (%)
Mean age (year)	24.5±3.6 years
Education (%)	
Below metric	77 (45)
Above metric	94 (55)
Mode of delivery (%)	
Normal vaginal delivery	120 (70.1)
Caesarean section	51 (29.9)
Time of initiation of breastfeeding (h)	1.5 (0.2–10.0)
Associated medical or surgical illnesses (%)	24 (14)
Duration of hospital stay (days)	4 (2–7)
Religion	
Hindu	122
Muslim	46
Sikh	1
Christian	2
Infant characteristics	
Mean birth weight (g)	2765±0.410
Low birth weight (%)	39 (22.8)

*Data are expressed as number (%), mean±SD or median (range). SD: Standard deviation

feeding techniques and need for more privacy from unwarranted visitors, respectively.

A majority of mothers had a feeling that the babies had not demanded feeds ($n=32$, 19%). A feeling of inadequate milk output was felt by 17% of mothers by the 3rd day ($n=29$) and it persisted in 2% of mothers at the time of discharge ($n=3$). Of these, the majority felt that babies were unable to maintain rhythmic sucking for 10 min ($n=24$, 14%) and were not adequately nursing on both breasts ($n=19$, 11%). On specifically asking about feeling of fullness of breast before feeding and softness after feeding, only 40% gave an affirmative reply (Table 2).

On assessing breastfeeding rates within the 1st h of delivery as one of the quality indicators, 61% of mothers met the criteria,

and 20% had fed between 2 and 4 h of delivery. Of the babies who received first feed after 8 h (n=23, 13%), the majority (91%) had been delivered by cesarean section. Among other indicators, 20 mothers (11.7%) did not fully understand the meaning of exclusivity of breastfeeding. Only 11% received any antenatal counseling regarding breastfeeding (Table 3 and Figure 2). Other minor problems faced by these first-time mothers included unwarranted discharge of milk while not feeding (n=32, 19%) and anxiety about the sustenance of the breastfeeding (n=12, 7%).

The predefined predictors consisted of the following factors: Mode of delivery, educational status of mother, religion, and prior knowledge about breastfeeding. Since the study was not powered to detect the associations, the odds of association mentioned below have been done only to depict significance, albeit large confidence intervals. Cesarean section was associated with significant issues of breastfeeding which included “felt” inadequacy of breastfeeding and anxiety about its sustenance (odds ratio [OR] 2.68 [1.04-6.91], p=0.041), delayed onset of first feed (OR 33.4 [12.67-88], p=0.0001), more incidences of pre-lacteal feeds (OR 9.51 [2.49-36.2], p=0.001), and feeling of inadequacy of breast milk quantity (OR 3.76 [1.64-8.58] p=0.001).

Having any educational background was associated with better latching and sustainability of suckling for at least 10 min. It was also a positive predictor of baby’s demands to feeds, nursing the baby on both breasts, and identifying problems related to the nipple and the areola while breastfeeding. The mothers who were illiterate were significantly at higher risk of having these problems, though such mothers (n=2) were very few in the study

(OR 43.5 [2-944], p=0.001). Religion of the mother did not predict any specific problem related to breastfeeding.

Prior knowledge about breastfeeding received from either a health-care provider or close relative was associated with fewer problems associated with latching and incidences of cracked nipple. The odds of having these issues in the group not counseled were 5.07 ([1.51-16.93], p=0.008) and 6.2 ([1.38-28.16], p=0.01), respectively.

DISCUSSION

The major problems that have persisted in primigravida mothers at the time of discharge from tertiary hospital included pain during feeding (29%), feeling of inadequate breast milk output (17%), and problems in technique of breastfeeding, especially, related to latching (12%). Since the participants in the present study were the first-time mothers, “any pain” during breastfeeding was assessed, and of these, only 4.6% were due to plausible psychologically perceived pain. Among the other causes, nipple-related issues were seen in 15% of the mothers and 7% had issues related to engorgement and swelling. This is similar to another study, wherein the incidences were approximately 20% each, at the 3rd postnatal day [10].

The incidence of the feeling of inadequate quantity of breast milk and difficulties perceived in latching has varied between 27–90% and 35–40% in various studies [10-16]. The reported rates of these problems are much lower in our study, as our study has been done at the time of hospital discharge. In a previous hospital-based study, wherein breastfeeding counselors prospectively

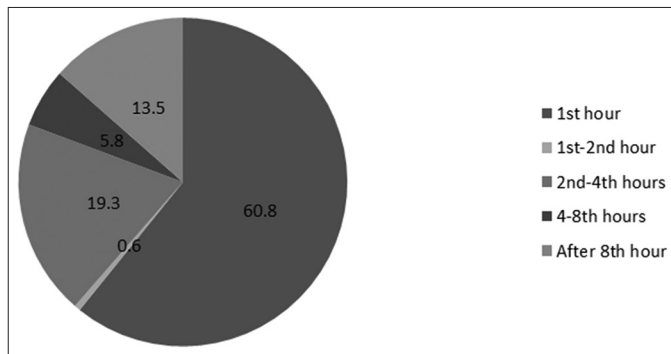
Table 2: The distribution of the responses of the questionnaire by the study population

Concerning issues of breastfeeding	n (%)	Factors associated with increased incidence of the concerning issues*
Pain while breastfeeding		
Any pain during breastfeeding	50 (29)	
Sore nipples	10 (5)	a
Cracked nipple	10 (5)	a, b
Increased feeling of sensitivity	10 (5)	
Pus discharge	2 (1.2)	
Associated hardness/swelling around areola	12 (7)	a
Others	8 (4.6)	
Issues with breast feeding technique		
Improper latching/position	20 (12)	a, b
Issues regarding breast milk quantity		
Not demanding feeds by day 3	32 (19)	
Feeling of inadequate milk production	29 (17)	c
Rhythmic sucking for <10 min	24 (14)	a, c
Not feeding well on both the sides	19 (11)	a, c
No perceptible difference in breast consistency before and after feeding	103 (60)	c
Other issues		
Feeling anxious about sustenance of breastfeeding	12 (2)	
Need for more privacy in wards	2 (1.1)	
Need for further explanation of breastfeeding issues	2 (1.1)	

*a: Education of mother below metric grade, b: Nonreceipt of prior breastfeeding counseling, c: Cesarean section

Table 3: The distribution of quality indicators regarding breastfeeding

Quality indicators of breastfeeding	n (%)
<i>On exclusive breastfeeding</i>	
Understanding duration required	166 (97)
Understanding what constitutes exclusive breastfeeding	151 (88)
Pre-lacteal feeds given	13 (7.6)
Supplemental feeds given before hospital discharge	26 (6.8)
<i>Others</i>	
Breastfeeding within 1 st h of birth	104 (61)
Antenatal counseling received for breastfeeding	19 (11)

**Figure 2: The distribution of the study population in relationship to the time of first breastfeed**

counseled and assessed the mothers for the first 3 days, the major issues seen in most of the mothers (>93%) were reported feeling of inadequacy of breast milk by the mother and poor attachment, as assessed by caretakers on the 1st day. These problems persisted at 2% and 32% rates, despite active intervention [10].

The putative predictors of problems associated with breastfeeding used in the present study have been validated previously, as the present study was not powered enough to detect specific risk factors [4,10,17,18]. Mothers who have undergone cesarean section are known to have significant issues in breastfeeding such as poor technique, feeling of inadequate quantity, and delay in onset of first breastfeed, as compared to those delivered vaginally [4,10]. Similar findings have been found in the present study, wherein these problems were found 3 times more in these mothers. Better educational status of the mothers has been reported to have a positive impact as assessed by breastfeeding indicators such as exclusivity at 6 months, though some studies have found this relationship not always true [17,18]. Our study detected better feeding technique and the earlier identification of problems related to areola and nipple, in mothers with any level of education irrespective of religion, though there were very few mothers who were illiterate.

Among the indicators of successful breastfeeding, our study assessed the rates of breastfeeding within the 1st h, which has been 61% in the present study against national average of 41% [19]. Although these rates should be higher in a tertiary care teaching hospital, the subjects in the present study have only been first-time mothers. Among the delay in onset of first feed after 8 h,

more than 90% of mothers had delivered by cesarean section. Similar findings have been reported in other studies [4,20]. On enquiring about the duration of breastfeeding exclusivity, most of the mothers (97%) had the right knowledge, though only a follow-up study can prove this.

The strengths of our study include the nature of study, wherein assessment has been done among primigravida mothers at the time of hospital discharge on a real-time, rather than retrospective, basis. Besides, correlation of known predictors of major issues of breastfeeding has been conducted in the present study. These risk factors can be specifically looked into in primigravida mothers during the hospital stay, and the specific breastfeeding problems could be addressed.

The main limitation was that the study was not powered enough to look into specific predictors of breastfeeding issues. We chose known factors and studied their association. Being a questionnaire-based study, it is plausible that not all the problems of breastfeeding have been addressed to, and among the reported rates, the real incidences could have been derived by another objective assessment, which was not done. Besides, the study being conducted in a tertiary care hospital, the results cannot be extrapolated to a community level setup.

CONCLUSION

This study presents the existing problems related to breastfeeding that have persisted at the time of discharge from a tertiary care hospital. It, thus, represents a real-time gap between the goals to be met and the breastfeeding assistance given that needs to be addressed by the core team.

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