

Original Research Article

Knowledge and factors affecting initiation of breast feeding in post-natal mothers in a tertiary care center

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ABSTRACT

Background: The study was planned to evaluate awareness of breast feeding among mother, institutional quality indicators of early breast feeding. The objective was to know factors causing delay in breast feeding initiation, to assess knowledge, cultural practices, and quality indicators of hospital regarding breast feeding initiative.

Methods: The observational study was conducted over a period of 3months from July 2017-Sept 2017 in a tertiary care centre of India. 118 postnatal mothers were interviewed for time of first breast feeding (dependent variable or outcome), and independent variables age, education, religion, parity, occupation of mother, antenatal visits, prelacteal feeds, customs of not breast feeding, duration of labour, mode of delivery, sedation, pain after delivery, baby over mother abdomen after birth, institutional quality indicators-knowledge of breast feeding given by doctor /nurses, relatives, self reading, mothers with correct attachment and position of baby during breast feeding and separation of mother and baby post delivery.

Results: Mean time of initiation of breast feeding was 1340.262min after birth. Prelacteal feeds, lack of education, cesarean deliveries, parity of mother, sedation, anesthesia during cesarean and lack of counselling by staff nurses were found to have early increased time of initiation of breast feeding.

Conclusions: Great lacuna in knowledge, attitude and practice of early breast feeding of mother.

Keywords: Early initiation breast feeding, Knowledge, Quality indicator

INTRODUCTION

The initiation of breastfeeding within one hour of birth has numerous nutritional and immunological benefits and has been found to reduce neonatal mortality.¹ There are very few studies examining the role of awareness of world health organization's breastfeeding recommendation in determining mothers breastfeeding decisions and practice.² As a result, the impact of promoting the recommendation on rates of breastfeeding

is less clear.³ This might be explained by a poor understanding of the breastfeeding recommendation or by poor knowledge, attitudes, and practice of breastfeeding in the community.⁴

This study was planned to evaluate awareness of breast feeding among mothers, to find out factors associated with delay in breast feeding, institutional quality indicators in form of knowledge given by doctors, nurses, self reading, during antenatal visits, awareness of early

initiation of breast feeding so that breastfeeding practice can be improved in institutional deliveries.

METHODS

The observational study was conducted over a period of 3 months from July 2017-Sept 2017 in a tertiary care centre of India. 118 postnatal mothers whose babies not in NICU were interviewed for various factors as per proforma and time of first breast feeding. Exclusion criteria were weight below 2kg, babies admitted to NICU, and congenital malformations interfering with feeding. Factors assessed for knowledge of mothers of breast feeding were: socio-demographic factors-age, education, religion, parity of mother, occupation of mother, previous neonatal deaths, sex of baby not coinciding with that expected by mother, number of antenatal visits, knowledge of breast feeding given by relatives, self-reading, prelacteal feeds (defined as any fluids or foods that were provided before the introduction of first breastfeeding) customs of not breast feeding, obstetric factors-duration of labour, mode of delivery, sedation given during normal delivery, pain after delivery interfering with lactation, baby over mother abdomen after birth, institutional quality indicators-knowledge of breast feeding given by doctor/nurses, mothers with correct attachment and position of baby during breast

feeding and separation of mother and baby post delivery were studied. All factors were studied in relation to time of first breast feeding after birth which was recorded in minutes after birth. Delay in breast feeding was more than 30 min after birth and more than 240min after cesarean section as per WHO recommendations.

Statistical analysis

Data was analysed with SPSS software. Descriptive analysis of all variables was done, and frequency of all variables was calculated and mean, median and standard deviation of continuous variables was calculated. Since, time of first feeding (dependent or outcome variable) was non-parametric (non-normally distributed) quantitative data, Kruskal-Wallis test and Mann-Whitney U tests of significance were applied to test significance between time of first feeding and other categorical variables. If independent variable had two categories, then Mann-Whitney U statistics was applied and in cases of more than 2 categories Kruskal-Wallis test was applied.

RESULTS

Sociodemographic factors, obstretical factors, knowledge of breast feeding of total 118 mothers and their frequency and percentage distribution are tabulated in Table 1, 2, 3.

Table 1: Table showing distribution of independent continuous variables.

	Age	Weight of baby(kg)	Separation	Time of first feeding
Mean	24.00	2.71715	146.44	1340.262
Median	24.00	2.75000	120.00	678.00
Std. Deviation	3.861	0.388583	329.923	1797.294
Range	25	1.504	3585	9057
Minimum	18	2.000	15	30
Maximum	43	3.504	3600	9087

Table 2: Table showing frequency of socio-demographic factors among subjects (independent categorical variable).

Factor	Number (frequency)	%
Age <20yr	22	18.6
Age 20yr-30yr	92	78.0
Age <30yr	4	3.4
Hindu	84	71.2
Muslim	34	28.8
0-10 th class	88	74.6
>10 th	30	25.4
Para 1	47	39.8
Para 2or>2	71	60.1
0-3anc visit	19	16.1
>3anc visit	99	83.9
No neonatal deaths	106	89.8
Previous neonatal deaths	12	10.2
Customs of not breast feeding	59	50
Custom of giving prelacteal feeds	59	50

Table 3: Table showing frequency and percentage of obstretical factors and institutional factors of mothers.

Factors	Number (frequency)	%
Normal delivery	54	45.8
Cesarean section	64	54.2
<16hr duration of labour in normal delivery	71	60.2
>16hrs duration of labour in normal delivery	37	31.4
Duration of labour nil in elective lscs	10	8.5
No sedation during delivery	49	41.5
Sedation during labour or cesarean	69	58.5
Baby not over mother abdomen after birth	108	91.5
Baby over mother abdomen	10	8.5
Mother expecting equally for both sexes of baby	84	71.2
Sex of the baby coinciding with mother's expectations	18	15.3
Sex of the baby not according to mother's expectations	16	13.6
Pain interfering with lactation	48	40.7
Pain interfering with lactation indicated by high requirement of analgesics	70	59.3
No anesthesia given during delivery or cesarean	53	44.9
Anesthesia (spinal or epidural or general) given during cesarean or normal delivery	65	55.1

Table 4: Quality indicators of knowledge of breast feeding.

Factor	Number (frequency)	Percentage
Knowledge of breast feeding given by doctors	103	87.3
Knowledge of breast feeding given by nurses	62	52.5
Knowledge of breast feeding gained by self-reading or by relatives	30	25.4
Incorrect attachment during breast feeding	112	94.9
Correct attachment during breast feeding	6	5.1
Incorrect positioning during breast feeding	102	86.4
Correct position during breast feeding	16	13.6

Table 5: P-value of various factors to show level of significance (If dependent variable has two categories, then Mann-Whitney U statistics has been applied and in cases of more than 2 categories Kruskal-Wallis test has been applied.

Test variable	P-value
Age category- age was categorized into 20 years and less, 21-30 years, 31 years and above	0.588
Religion	0.282
Education	0.023
Parity	0.002
No of ANC visits	0.128
Type of delivery	0.04
Duration of labour	0.127
Sex of the baby not coinciding with mother's expectation	<0.0001
Pain interfering with lactation	0.289
Anaesthesia (spinal /epidural/general)	0.001
Customs of not breast feeding	0.001
Prelacteal feed	0.001
IBF doctor	0.536
IBF nurse	0.002
IBF relatives	0.097
IBF self reading	0.097
IBF knowledge	0.097
Correct attachment	0.565

Accordingly mean age of delivery was 24yr, mean birth weight was 2.7kg, mean duration of mother baby separation post-delivery was 146min (2.4hr), mean time of first breast feeding was 1340.262min (22hrs) (Table 1). Mean time of breast feeding for mothers with cesarean delivery was 1953min (32hr) and in normal delivery 427.48min (7hrs) after birth. 6 mothers out of total 54 (11%) who delivered normally could establish feeding within half an hour of child birth whereas among cesarean mothers 7 mothers out of 64 (10%) had initiation of breast feeding within 240min after birth. 83.9 % of mothers had more than 3 antenatal visits. 59.3% of mothers had pain post delivery which interfered with lactation but this was not found to have significant association with delay in initiation of breast feeding as p-value was 0.289 (Table 5). 5.1% and 13.6% of mothers had correct attachment and position of breast feeding. Factors with significant P-value (Table 5) were interpreted as: increasing first time of feeding was significantly associated with better education, parity of mother, customs of not breast feeding, prelacteal feeds being given among sociodemographic factors and cesarean section as mode of delivery among, sex of the baby not coinciding with expectation of mother, anesthesia in form of spinal, epidural or general anesthesia given during delivery, not being told about importance of breast feeding by nurse. Separation of mother and baby was found to be significant associated with increased time of initiation of breast feeding. Duration of labour was not found to be significantly associated with time of first breast feeding.

DISCUSSION

Breastfeeding decisions and practices are influenced by multiple factors, including knowledge, attitudes, and beliefs, as well as sociocultural and physiological factors.⁵⁻¹⁰ Studies have found that older maternal age and higher educational level are associated with breastfeeding at 6months whereas mothers in full-time employment less likely to be breastfeeding at 6 months.⁵⁻⁷ Longer breastfeeding duration has also been found associated with better maternal infant feeding knowledge, attitudes, and confidence in multiple studies.⁸⁻¹⁰ Women's pre-birth breastfeeding intention is a good predictor of the actual duration of breastfeeding.^{11,12}

It can be established in the present study that even in institutional deliveries there is gross lack of knowledge about breast feeding and importance of early breast feeding among mothers which is reflected by delay in first breast feeding by mothers. Antenatal visits are of importance value in birth preparedness of mothers.¹⁰ But in our study despite that 99 mothers (83%) had more than 3 antenatal visits (Table 2,5) there was delay in initiation of breast feeding in a large number of mothers (98% of normal delivery mothers and 89% of cesarean mothers), i.e. antenatal visits are an important lacuna of breast feeding counseling. In a study conducted in Australia, Rempel found that women with a strong desire to

breastfeed during the antenatal period were more likely to be breastfeeding at 6months, whereas those with no intention to breastfeed were less likely to be breastfeeding at 6months.¹³ 87%, 52.5%, 25.4% of mothers were counseled by doctors, nurses and self reading respectively (Table 4) in our study but only 5.1% and 13.6% had correct attachment and position respectively which implies inadequate knowledge and great discrepancy in counseling of mothers and actuation of positioning and attachment of baby during breast feeding. The fact is supported in multiple studies.²⁻⁴ Lack of education of mother and no breast-feeding counseling done by nursing staff was found to be significantly associated with increased time of initiation of breast feeding in present study. In a study conducted by Ksenia Bystrova et al, the intensity of mother's perception of breast engorgement from one to three days after birth was significantly more pronounced in multiparous women compared to primiparous mothers, breastfeeding initiation was later in primiparous mothers than multiparous mothers and Parity of mother was significantly associated with increased time of initiation of breast feeding in our study also.¹⁴

Traditions and customs of not feeding with breast, giving prelacteal feeds (honey, ghee (refined butter), sugar water and animal milk), sex of the baby not as desired by mother had significant impact i.e. increased time of initiation of breast feeding (Table 5) in our study. Time of mother baby separation was directly proportional to time of initiation of breast feeding. A cohort study was conducted by Khanal et al with 735 mother-infant pairs and it was found that mothers who were assisted by traditional attendants during childbirth, delivered by caesarean section, from ethnically disadvantaged families were less likely to initiate breastfeeding early whereas the mothers from the poor families and did not introduce prelacteal feeds to their infants were more likely to initiate breastfeeding within the first hour which is consistent with results from our study as well.¹ Pain post-delivery was not found to have significant impact on initiation of breast feeding but anesthesia in form of spinal, epidural or general anesthesia or sedation given in normal delivery or cesarean section was significantly associated increased time of initiation of breast feeding in present study. Caesarean section has been reported to be a major risk factor of lower duration of exclusive breastfeeding, delayed initiation of breastfeeding and increased risk of prelacteal feeding.^{15,16}

Our study also found that the infants who were delivered by caesarean section were also at risk of not being breastfed within the few hours of birth. Other studies have also found that effect of anaesthesia, caesarean procedure, reduced maternal alertness and inadequate maternal skills to initiate breastfeeding are some of the reasons for delayed breastfeeding among caesarean births.¹⁵ In a study by Wen et al longitudinal data from 201 first-time mothers was collected and mothers who knew the recommendation were 26% more likely to

initiate breastfeeding (adjusted risk ratio [ARR] 1.26, 95% confidence interval [CI] 1.14 to 1.37, $p = 0.001$) and 34% less likely to have stopped breastfeeding (adjusted hazard ratio 0.66, 95% CI 0.46 to 0.95, $p = 0.03$) at 12 months than those who did not.² Awareness of the breastfeeding recommendation to breastfeed exclusively for 6 months was found to be independent positive predictor of breastfeeding initiation and duration.¹

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. Mean time of initiation of breast feeding was 1340.262min after birth in our institutional deliveries. Mothers who gave prelacteal feeds, followed customs of not breast feeding, lack of education, underwent cesarean deliveries, sedation, anesthesia during cesarean and lack of counseling by staff nurses were found to have early increased time of initiation of breast feeding. Improving mother awareness of the recommendation and strengthening their intention to breastfeed could lead to increased breastfeeding initiation and duration.

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REFERENCES

1. Khanal V, Scott J, Lee A, Karkee R, Binns C. Factors associated with early initiation of breastfeeding in Western Nepal. *Int J Environ Res Public Health*. 2015;12:9562-74.
2. Wen L, Simpson M, Rissel C, Baur L. Awareness of breastfeeding recommendations and duration of breastfeeding: findings from the healthy beginnings trial. *Breastfeed Med*. 2012;7(4):223-9.
3. Britton C, McCormick FM, Renfrew MJ. Support for breastfeeding mothers. *Cochrane Database Syst Rev*. 2007;(1):CD001141.
4. Wen LM, Baur LA, Rissel C, Alperstein G, Simpson JM. Intention to breastfeed and awareness of health recommendations: findings from first-time mothers in southwest Sydney, Australia. *Inter Breastfeeding J*. 2009;4(1):9.
5. Amir LH, Donath SM. Socioeconomic status and rates of breastfeeding in Australia: Evidence from three recent national health surveys. *Med J Aust*. 2008;189:254-6.
6. Cooklin A, Donath S, Amir L. Maternal employment and breastfeeding: Results from the longitudinal study of Australian children. *Acta Paediatr*. 2008;97:620-3.
7. Chambers JA, Alder EM, Hoddinott P, McInnes RJ. A systematic review of measures assessing mothers' knowledge, attitudes, confidence and satisfaction towards breastfeeding. *Breastfeeding Review*. 2007;15(3):17.
8. Chezem J, Friesen C, Boettcher J. Breastfeeding knowledge, breastfeeding confidence, and infant feeding plans: Effects on actual feeding practices. *J Obstet Gynecol Neonatal Nurs*. 2003;32:40-7.
9. Scott JA, Binns CW, Oddy WH, Graham KI. Predictors of breastfeeding duration: evidence from a cohort study. *Pediatrics*. 2006;117(4):e646-55.
10. Papinczak TA, Turner CT. An analysis of personal and social factors influencing initiation and duration of breastfeeding in a large Queensland maternity hospital. *Breastfeed Rev*. 2000;8:25-33.
11. Forster DA, McLachlan HL, Lumley J. Factors associated with breastfeeding at six months postpartum in a group of Australian women. *Int Breastfeed J*. 2006;1:18.
12. Donath S, Amir LH, ALSPAC Study Team. Relationship between prenatal infant feeding intention and initiation and duration of breastfeeding: A cohort study. *Acta Paediatr*. 2003;92:352-6.
13. Rempel LA. Factors influencing the breastfeeding decisions of long-term breastfeeders. *J Hum Lact*. 2004;20:306-17.
14. Ksenia B, Widstrom AM, Matthiesen AS, Arvidson AB, Nystrom BW. Early lactation performance in primiparous and multiparous women in relation to different maternity home practices. A randomised trial in St. Petersburg. *Inter Breastfeeding J*. 2007;2:9.
15. Patel A, Banerjee A, Kaletwad A. Factors associated with prelacteal feeding and timely initiation of breastfeeding in hospital-delivered infants in India. *Journal of Human Lactation*. 2013;29(4):572-8.
16. Karkee R, Lee AH, Khanal V, Binns CW. Initiation of breastfeeding and factors associated with prelacteal feeds in Central Nepal. *J Human Lactation*. 2014;30(3):353-7.

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