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ABSTRACT

Background: Despite its known advantages, breastfeeding rates are low world over. Large number of factors affects breastfeeding. The aim was to study maternal and neonatal factors that affect early initiation of breastfeeding in the perinatal period and to evaluate the knowledge, attitude and practice of postnatal mothers for early initiation of breast feeding in the obstetric wards.

Methods: A cross sectional study carried out from October 2010 to December 2010. Study conducted in 175 Post natal mothers from the maternity wards of a tertiary care hospital in Vadodara city. Mothers were interviewed within 5 days after the birth of the child. Data was collected using a structured questionnaire with some open and close ended questions and data was analyzed by Epi Info 3.2 (window based) software.

Results: Most common causes of delay in initiating breastfeeding were caesarian section and fatigue (29.7% and 21.1% respectively). 32.6% mothers initiated breastfeeding within one hour of delivery. Incidence of early initiation of breastfeeding in mothers less than 21 years of age was 29.4%, 24.6% in illiterate mothers and 25% in those delivering by caesarian section. Early initiation of breastfeeding was maximum (46.7%) in the first and minimum (24.3%) in the third shift of work of health care workers.

Conclusion: Lack of adequate information, maternal education level, socioeconomic factors, etc. influences the early breast feeding practices which can be overcome by proper support, care and counseling provided by health care staff.

Keywords: Early initiation, Breast feeding, Postnatal Mothers

INTRODUCTION

High rate of infancy deaths is largely attributed to very high share of neonatal deaths (66% of infant deaths in 2007, in India). Accelerated reduction in the incidence of neonatal deaths alone can contribute substantially towards achieving Under 5 Mortality Rate (U5MR) and IMR targets of the Millennium Development Goals¹.

Breast-feeding is the standard way of feeding all infants². It also enhances sensory and cognitive development and is one the most cost effective

ways to reduce infant morbidity and mortality from diarrheal disease, respiratory disease and other infections. Later in life, breast-feeding brings continuing benefits in terms of lower rates of obesity and reduced risk of chronic diseases². Breast-feeding also offers health advantages for the breastfeeding mother, including an earlier return to pre-pregnancy weight³, reduced risk of breast cancer and ovarian cancer and helps to space pregnancies². There are also significant social, environmental and economic benefits. It is also an environmentally safe method of feeding. Early

initiation of breast feeding can reduce neonatal mortality by 22% and thereby decrease the Infant Mortality Rate and contribute to the attainment of millennium development goals⁴. In India alone early initiation of breast feeding can save 250,000 lives by reducing deaths mainly due to diarrheal disorders and lower respiratory tract infections in children⁵. In South Asia, only 24% - 26% of babies born in India, Pakistan and Bangladesh are breastfed within 1 hour while the corresponding rate for Sri Lanka is 75%⁶

Keeping in mind the above mentioned the present study was carried out to learn about the incidence of early initiation of breast feeding in a tertiary level health institute. Breastfeeding is a natural process that seems to have been adversely affected by the "modernization" of society. Though it is now widely accepted that breast milk is the best for the baby, it is also a well-known fact that exclusive breastfeeding rates in early infancy are still too low. A number of studies have shown that deficits in knowledge amongst health workers and. Deficits in the knowledge of health workers can be bridged by training, which should result in increased breastfeeding rates. This short, prospective study was undertaken to identify factors that affected early initiation of breastfeeding in the perinatal period.

METHODS

In the cross sectional study carried out between October 2010 to December 2010 mothers were randomly selected using simple random sampling technique from those fulfilling the inclusion criteria.

Study Universe: Study conducted in Maternity ward of a tertiary care hospital where routine breastfeeding advice is given during antenatal visits as well as in the perinatal period. Departmental Ethical Clearance was taken before commencement of study.

Inclusion Criteria: Women delivering in the labor room of the obstetric department of the selected tertiary care hospital; delivered within the past 5 days of cross sectional study carried out from October 2010 to December 2010 on date of conduction of interview and only women who gave birth to a healthy baby were included in the study

RESULTS

Table 1 show the demographic profile of the mothers who delivered at the obstetric department of the tertiary care of hospital.

Table 1: Demographic Profile of subjects under the study

Demographic Profile	Study group (n=175)
Mean Age	23.9 ± 3.8 years
Mean Weight	52.8 ± 7.5 kg
Mean Height	154.1 ± 5.6 cm
Age	
≤20 years	34 (19.4)
21-25 years	95 (54.3)
26-30 years	41 (23.4)
31-35 years	3 (1.7)
≥36 years	2 (1.2)
Religion	
Hindu	134 (81.5)
Muslim	31 (17.7)
Christian	10 (0.6)
Education	
Illiterate	46 (26.3)
Primary (up to 7 th Std)	77 (44)
Secondary	44 (24)
Higher Secondary	3 (1.7)
Graduate	2 (1.1)
Post graduate	3 (1.7)
Occupation	
Housewife	117 (66.9)
Daily Wager	40 (22.9)
Paid worker	16 (9.1)
Student	2 (1.1)

In this study two-thirds of the babies were vaginally delivered the proportion of babies delivered by caesarian section was one third. When the knowledge, attitude and practices of the mothers with regards to breastfeeding and breast-milk were assessed it was found that **84.6%** mothers agreed to the fact that mother's milk alone is the best food for the newborn. (Table 2)

The study showed that sufficiency of breastfeeding is one of the important areas which commonly baffle mothers (Table 3). Due to lack of confidence they are easily mislead into thinking that they do not secrete adequate milk in order to feed their newborn. This is especially true for primiparous women. A little support and guidance in the right direction can go a long way in allaying their worries.

Table 2: Perception of Mothers with regards to food for their newborn (N=175)

Perception of Mothers	No. (%)
Best food for a newborn	
Mother's milk alone	148 (84.6)
Mother's milk supplemented with top milk	22 (12.6)
Top milk alone	5 (2.9)
Is mother's milk superior to top milk?	
Yes always	130 (74.3)
Yes after 2 days	8 (4.6)
Yes, but only for healthy good weight babies	18 (10.3)
Don't know	19 (10.9)
Most important reasons for avoiding top feeding a newborn	
Cost	10 (5.7)
Risk of contamination	36 (20.6)
Poor availability	1 (0.6)
Risk of indigestibility	41 (23.4)
Does not support proper growth and nutrition	23 (13.1)
Dictated by tradition	13 (7.4)
Does not protect against local infections	3 (1.7)
Don't Know	52 (29.7)

Table 3: Perception of mothers with regards to sufficiency of breastfeeding

Perception of Mothers	No. (%)
Is only breastfeeding sufficient for initial months?	
Yes always	90 (51.4)
Only if the secretions are good right from the time baby is born	14 (8.0)
Yes but requires additional water in warm climate	46 (26.3)
Don't know	25 (14.3)
For how long should breastfeeding be continued in a child?	
Breastmilk is never given alone and is always supplemented	5 (2.9)
Up to 4-6 months	118 (67.4)
Up to 1 year of age or more	26 (14.9)
As long as there are good secretions	26 (14.9)

In the present study it was found that by and large mothers depend on their families for this purpose (17.1% for breastfeeding knowledge and 57.1% for problem solving) among the study group. Thus there remains a risk of their being misguided by traditional or routine practices which are scientifically unsound. Also regrettably it was found that majority of women

interviewed in the study group had received no information at all during their pregnancy about breastfeeding (77.1%) and even post delivery were unsure about whom to ask in order to solve their breastfeeding related queries (21.7). This shows major areas one should work on in order to help mothers' breastfeed their babies optimally.

A majority of the mothers in the study group quoted caesarian section and fatigue (29.7% and 21.1% respectively) as the reason for delay in initiating breastfeeding, which can be overcome by proper support and guidance of health care staff and family members.

Table 4: Practices of mothers with regards to feeding a newborn

Food	No. (%)
Initiation of breastfeeding post-delivery	
Within 30 min	23 (13.2)
30 min to 1 hr	34 (19.4)
1 hr to 3 hrs	60 (34.3)
3 hrs to 6 hrs	17 (9.7)
6 hrs to 24 hrs	6 (3.4)
>24 hrs	35 (20.0)
Reasons for not feeding in 30 min	
Fatigue	37 (21.1)
Baby was separated	23 (13.1)
Asked by some family members not to do so	8 (4.6)
Asked by some health professional not to breastfeed due to medical reasons	5 (2.9)
I thought I would not have sufficient milk secretions	5 (2.9)
No / poor secretions	23 (13.1)
Caesarian section	52 (29.7)
Pre-lacteal given	
Sugar or glucose water	6 (3.6)
Honey	12 (6.9)
Traditional fluid mixture	2 (1.2)
Nothing	155 (88.6)
Food other than breastmilk offered to newborn	
Water	3 (1.7)
Top milk	12 (6.9)
Tea or coffee	2 (1.1)
Nothing	158 (90.3)

Education of Mother vs. Initiation of Breastfeeding

The rate of mothers initiating breastfeeding early was higher in literate mother as compared to illiterate mothers.

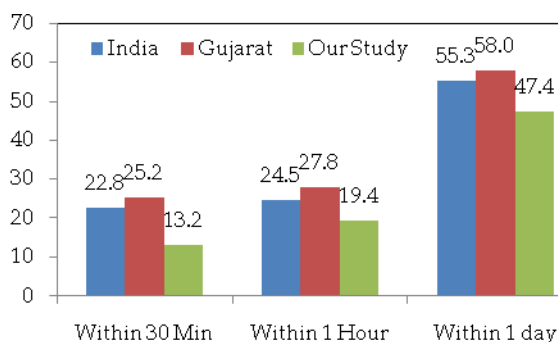


Figure 1: Comparison of Initiation of Breastfeeding in various studies

Time of Birth of the Newborn vs. Initiation of Breastfeeding

The nursing staff in institute under study worked in three shifts first shift is between 8 am to 2 pm (6 hrs), second between 2 pm to 8 pm (6 hrs) and third in between 8 pm to 8 am (12 hrs). As was expected early initiation of breastfeeding was maximum (46.7%) in the first and minimum (24.3%) in the third shift in the study group. It may be further concluded that in all shifts at least one health care worker should be committed to help mothers initiate breastfeeding within 1 hour of birth.

Birth weight of child vs. Initiation of Breastfeeding

When we evaluated initiation rates for breastfeeding in the first hour after birth on the basis of birth weight we found that in the study group 24.2% of the newborns weighing 2.5 kilograms or less at birth were breastfed within one hour. Newborns with low birth weight are most likely to become hypoglycemic and hypothermic and suffer their short and long term consequences. So, unless medically contraindicated (e.g. prematurity) these newborns should be immediately put to breast. This will only happen if the mothers and paramedical staff are properly sensitized and motivated.

DISCUSSION

The World Health Organization⁷ recommends that breastfeeding be initiated within 1 hour of birth. Early initiation of breastfeeding (within 1

hour) provides benefits for both the baby and the mother. WHO and other organizations recommend delaying for at least the first hour routine newborn care procedures that separate mother and baby such as bathing and weighing.⁸ This will allow mother and newborn uninterrupted skin-to-skin contact until the first breastfeed. Despite these recommendations, only 39% of newborns in the developing world are put to the breast within one hour of birth, and only 37% of infants under-six months of age are exclusively breastfed⁹. When early initiation of breastfeeding was assessed in our study it was found that 13.2% of the newborns were breastfed within the first 30 minutes after birth in the present study, which is much lower than overall rates for Gujarat as well as India (Table 4). Again early initiation rates as per WHO definition were only 29.9%, also comparatively low. Although the rate of initiation within the first 24 hours was 80%, it is known that breastfeeding within the first hour of life is the measure which can decrease neonatal mortality and morbidity. Mothers are more likely to successfully initiate lactation and maintain optimal breast-feeding behaviour if they initiate breast-feeding shortly after birth. Breast-feeding should begin no later than one hour after the delivery of the infant. NFHS-2 (1998-99) study for Gujarat revealed that 10% mothers out of 1,324 under three children initiated breast-feeding within one hour of birth, while 36.6% mothers initiated breast-feeding on the same day. The recent finding of NFHS-3 (2005-06) ranked Gujarat on 18th position in India by initiation of breast feeding (27.8%) within 1 hr¹⁰.

According to WHO's indicator for assessing breast feeding practices, timely initiation of breast feeding in the postnatal ward of the hospital was very low. The delay happened due to occurrence of too many deliveries in the Labour room and the team of doctors and nurses gave priority to the shifting of mother to the indoor ward where they were finally motivated for early initiation of breast feeding. But this process of shifting use to take one hour leading to delay in timely initiation of breast feeding and thus important time was missed. Therefore it is recommended that all mothers who deliver their babies in hospital and are in labour room must be encouraged for the commencement of breast feeding as early as possible preferably within one hour of delivery for better health of mother as well as child. Initiation of breast feeding within one hour of

birth was one of the Ten steps to successful breastfeeding on which the BFHI was based and implemented in 1992¹¹. It calls for support to all mothers in the postnatal ward during the first hour to ensure early initiation of breast feeding. Obstetricians and other concerned with maternity care have key roles in promoting breastfeeding¹². The Pediatrician can influence a mother's decision for timely initiation of breastfeeding. A significant difference on the aspect of early initiation of breast-feeding (within one hour) was noticed between mothers with normal delivery and those who underwent caesarean section. Early, successful initiation of breastfeeding gets affected negatively by caesarean delivery was reported in 1990¹³. The efforts must be carried to promote early initiation of breast feeding even after caesarean delivery. Some mothers gave pre-lacteal feed to the child. The practice of pre-lacteal feeding was found to be associated with delay in initiation of breast feeding. Ahmed et al reported that type and duration of prelacteal feeding had significant negative influence on milk secretion. Pre-lacteal feeding forms a vicious cycle with 'coming in' of milk; it first delays initiation, which later encourages prelacteal feeding¹⁴. The observations of the present study supports to frame a policy that the health care staff of postnatal ward must utilize the opportunity to persuade mothers for timely initiation of breast feeding to the mothers who deliver their babies in the hospital.

CONCLUSION

Lack of adequate information being given to mothers is a major factor responsible for low rates of exclusive breastfeeding and early initiation of breast feeding. Maternal education, socio-economic factors are also known to influence breastfeeding decision. The lack of experimental research particularly in the Indian context means that it is unclear what the most effective intervention would be to improve early initiation rates as far as breastfeeding is concerned in India. Researchers suggest that early initiation of breastfeeding a cost efficient means over and above exclusive breastfeeding is an independently effective intervention to achieve improvement in health care indicators. Dedicated Health care staff and nursing staff can

play significant role in improving knowledge, attitude and practice of breast feeding.

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