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Research article

A study to assess the let down reflex among mothers who had undergone cesarean section

Bhagyashree A. Jogdeo¹, Nilima Bhore²

¹BVDU, College of Nursing, Pune, Maharashtra, India

²BVDU, College of Nursing, Sangli, Maharashtra, India

Abstract

Breastfeeding is more difficult after a caesarean section for many reasons. There are the significant areas of barriers for mothers who have undergone cesarean section to establish breast feeding. **Aim:** To assess the let down reflex among mothers who have undergone caesarian section at selected hospitals of Pune city. **Objectives:** To assess the let down reflex among mothers who have undergone caesarian and to find the association of let down reflex among mothers who have undergone caesarian section with selected demographic variables. **Materials and methods:** This was a quantitative exploratory pilot study. Non probability purposive sampling was used for the selection of 40 samples. Let down reflex were assessed on 3rd day of caesarian section. **Results:** The findings of let down reflex revealed that only 75 % of subjects had poor let down reflex and none of them had excellent let down reflex. **Conclusion:** The assessment of let down reflex will help to know the lactation failure in initial stage and it will help to maintain the lactation by simple measures like health education and prevent complications.

Keywords: Let down reflex, mothers, cesarean section.

***Corresponding author: Mrs. Bhagyashree A. Jogdeo**, Assistant Professor, BVDU, College of Nursing, Pune, Maharashtra, India. Email: bjogdeo@gmail.com

1. Introduction

The woman represents the mother's natural feminine characteristics in the universe. Human milk has no substitute and breast is nature's apparatus for feeding babies [1]. A mother who has undergone cesarean delivery has a dual role in both Post-operative self care as well as newborn care [2]. Breast feeding become more difficult due to incision pain, increased top feeding, effect of medication, delayed access of baby, separation of baby and mother, anemia due to blood loss [3].

According to World Health Organization's report on delivery settings and cesarean section rates, data collected from a population based survey conducted during Sept-2003 in 30 selected countries covering provinces in three regions of China. In 1993-1994 (4.9%), 2001-2002 (20.4%) and 2008 (40%). This result

shows massive increase the rate of cesarean section in a linear form [4].

WHO reviewed 107950 births from nine countries in Asia including India, china, Japan, Nepal and Srilanka during 2007-2008, and found that 27%births were delivered by cesarean section. Rates of cesarean section as compared to WHO recommendations, many countries have documented higher rates of cesarean section. In developed countries like France, Germany Australia, U.K has also documented similar trends [5]. In many developing countries like India, China and Brazil birth by cesarean sections in private hospitals were done unnecessarily. The ratio for China is 1:2(vaginal delivery: cesarean delivery), for Thailand, Vietnam and India ratios are 1:5 [6].

In Case of cesarean section, mothers tend to initiate breastfeeding late than mothers deliver vaginally. Very few mothers try to breastfeed the babies, but repeated failure to success, can stop them from trying. Mothers

who have undergone cesarean section have emotional and physical stress [7]. They may have discomfort due to incision pain, drowsiness due to drugs, or exhausted due to labor and large amount of blood loss due to surgical intervention. This situation can become a rationale to start bottle feeding which is easier and more convenient for the mother as well as the attendant of mothers [8].

Breast-feeding is one of the natural and intimate human interactions. Human breast milk has no substitute. A woman has a god gifted apparatus to feed the baby. As a mother, one of the best things she can do for baby .The benefits of breastfeeding for mother and baby are undeniable. Human breast milk is full of nutrients and antibodies, which boost the immunity, help for digestion as well as optimum brain development [9].

Many women experiences common problems while trying breast-feeding. Unfortunately, if mother experiences ongoing difficulties to trying or establish breastfeeding, she may become frustrated and discouraged, which can lead to stop trying to breast feed. To establish successful breast feeding, adequate education and support is a core aspect [10].

2. Method and material:

Exploratory study design was selected to assess the let down reflex of mothers who undergone cesarean section. Non-probability purposive sampling was used for the selection of 40 samples.

Sample selections Criteria - Mothers after 48 hours of cesarean section .have a normal newborn baby were selected. Mothers who receive medication for lactation, delivered twins or more than those newborn and critically ill mothers were excluded from study.

Research Tool was developed in two sections .Section one dealt with demographic variables of mothers and her neonate. Second Section includes assessment of let down reflex based on semi structured questionnaire and observation check list.

Let down reflex were assessed on 3rd day of caesarian section.

Statistics:

With the help of descriptive and inferential statistics, data analysis was done for frequency and percentage distribution of demographic variables, chi square and Fisher exact test was used for association.

3. Results:

• Details of demographic variables

Age of mother - Demographic data collected from both the group shows majority of the mothers falls in the age group of 24-28years and 29-33years which is peak

period of reproduction .Only few of them were elderly, in the age group above 34 years of age.

Birth weight of neonate Mothers who had undergone caesarian section from both the group, mothers of the neonate who had birth weight more than 3 kg, after the interviewed with mothers, researcher noticed that during antenatal period mothers were aware about extra requirement of food, adequate rest and sleep, practicing the relaxation technique and few of them had exposure to Garbhsanskar, etc. which may help the fetus to gain the weight.

Gender of Neonate- Mothers who had undergone caesarian section from both the group, majority had female child ,which shows awareness about PCPNDT Act related to female feticide.

Initiation of breast feeding after cesarean section-Majority of the mothers from both the group initiate the breast feeding after 4 hours of cesarean section researcher found that this delay due to lengthy process of shifting the mother from operation theatre to PNC ward, influence of anesthetic drugs, multiple task of nurses hampering to assist the mother for breast feeding etc. Received supplementary food to enhance the lactation-.Majority of mothers from both group received supplementary food to enhance the lactation.

Assessment of let down reflex

Table No 1: Assessment of let down reflex among mothers who had undergone caesarian section.

N=40

Let down reflex	Frequency	Percentage
Poor	30	75
Good	10	25
Excellent	00	00

Table no 1 depicts that only 25%mothers had good let down reflex and 75% mothers had poor let down reflex. None of them had excellent let down reflex.

• Association of letdown reflex with demographic variables

N=40

(Table n: 01)

Association of letdown reflex with age of mother, birth weight and gender of neonate and initiation of breast feeding after caesarian section ,number of times baby been breast feed all these p-values are small than 0.05 which indicates significant association with letdown reflex. However, receiving any supplementary food to enhance lactation and requirement of top feed p-value is larger than 0.05, which indicates no significant association with letdown reflex, quantity, and quality of received supplementary food is discussed under the heading of demographic variables.

Demographic variable		Poor	Good	Excellent	p-value	Inference
Age of the mother	18-23 years	5		-	0.000	Significant
	24-28 years	20	2	-		
	29-33 years	10		-		
	34 years and above	3		-		
Birth weight of the neonate	2.5kg.-3kg	8	7	-	0.000	Significant
	Above 3kg	15	10	-		
Gender of neonate	Female	20	11	-	0.000	Significant
	Male	5	4	-		
Initiation of breast feeding after caesarian section	Within first 4 hours	15	-	-	0.000	Significant
	After 4 hours	15	10	-		
Receiving any supplementary food to enhance lactation	Yes	14	16	-	0.132	Not Significant
	No	4	6	-		
	No	37	83	-		

4. Discussion

Association of letdown reflex with age of mother: Since p-value is small than 0.05, which indicates age of mothers, was found significant association with letdown reflex. As the age of mother increases let down reflex decreases.

These above findings are supported by research done by K G Dewey et al in 2013, to assess the relationship between maternal age and breast milk volume, study concludes, older primipara (24 years and above) produced less milk in the first week of postpartum than younger primipara (age between 16-23) Researcher suggest that lactation capacity is greater before the age of 23 and decline thereafter [11].

Association of letdown reflex with parity of mother: Since p-value is small than 0.05, which indicates parity of mothers, was found significant association with letdown reflex. As the parity, increase the let down reflex increases.

Researcher observed primipara mothers are more anxious, inexperienced and less confident to handle the neonates than multi Para mothers therefore let down reflex is more in multi para mothers than primipara mothers.

Association of letdown reflex with birth weight of the neonate: Since p-value is small than 0.05, which indicates birth, weight of the neonate was found significant association with letdown reflex. As the birth, weight was more the letdown reflex of the mother was also more. Sucking and swallowing reflexes are more active, strong as per the birth weight increases. Mothers who had undergone cesarean section were more satisfied to have the baby having good birth weight, which shows

more bond between mother and baby resulted in more letdown reflex.

Association of letdown reflex with gender of neonate: Since p-value is small than 0.05, which indicates gender of neonate, was found significant association with letdown reflex. Mother who had male child shows increased in letdown reflex than Mother who had female child. Data supported by review of literature.

A study done by Dr. Abhishek Chakravarty in 2010 to assess the gender bias in breastfeeding and missing girls in Africa and compare the findings with India use sample of over 100,000 children from 32 waves of DHS surveys across 17 countries. Researcher found that boys are breastfed for 0.657 months longer than girls in North African countries, which is nearly twice male advantage of 0.391 months found for India [12].

In September 2012, a study at Michigan State University discovered that among 72 mothers in rural Kenya, moms with sons generally produced richer milk (2.8 percent fat compared with 0.6 percent for daughters) [13].

A study done at Boston University in 2010 quantified the nutrient and energy density in breast milk of affluent mothers in Massachusetts. The study revealed that mothers of boys produced milk that had 25% greater energy content than mothers of girls [14].

As per the culture and tradition mother whom shows more let down reflex who had male child than female child prefers male gender.

Association of letdown reflex with initiation of breast-feeding after caesarian: Since p-value is small than 0.05 which indicates initiation of breast feeding after caesarian section was found significant association with letdown reflex. Mothers who initiated breast-feeding within first four hours after cesarean section shows increased letdown reflex than Mother who initiated breast-feeding after four hours of cesarean section. Delayed first breast feeding lead to impairment of hormone, which can lead to delay breast milk.

Association of letdown reflex with number of times baby been breast feed per day, since p-value is small than 0.05 which indicates number of times baby been breast feed per day was found significant association with letdown reflex. As the frequency of breast feeding increases the letdown reflex also increased.

The milk production depends on the milk drainage. Secretary and myoepithel cells are highly sensitive to milk tension and it is necessary to keep the tension low. Regular and repeated emptying of breasts by sucking will stimulate oxytocin and prolactin, which will increase the milk secretion and flow [15].

Association of letdown reflex with requirement of top feed: Since p-value is small than 0.05, which indicates requirement of, top feed per day was found significant association with letdown reflex. Increased requirement

of top feeding decreases the let down reflex. Mother as well as family members have myth that for first four days mothers will not secrete the adequate breast milk and neonate unable to fulfill his nutritional requirement with available breast milk. Supplementary formula often leads to practice for the prevention of dehydration also to minimize the weight loss which occurs normally after birth. These factors can lead to challenge a mother's buoyancy and wish to breast feed.

Association of letdown reflex with receiving supplementary food to enhance lactation: Let down reflex shows no association with receiving supplementary food to enhance lactation. Researcher observed majority of mothers from both group received supplementary food to enhance the lactation, Researcher observed the quantity and frequency of food was very less and mothers believe that more quantity can increase their body weight and fear of tension on sutures due to cesarean section and regarding frequency, few of mothers believe that if they eat frequently their child will be prone to rickets. Regarding quality of supplementary food to enhance lactation was consumed by majority of the mothers were only milk, available in canteens.

These above findings are supported by research done on dietary practices among lactating mothers and amount of breast milk transferred, occurrence of breastfeeding, and time spent for the breast feeding, as well as change in weight of neonate, were recorded on days 1,3,5,7 day of delivery. 60 mothers and their newborns were included in study. Variations in breast feeding and type of food consumption are not significantly related to each other. Researcher maintained food consumption means vegetarian, non vegetarian and mixed type of food.

Conclusion

In Indian context there are many studies carried out on the breast feeding but no studies carried out to assess the let down reflex of mothers who had undergone cesarean section. Findings suggest that maternal stress during this phase as well as other parameters affect the let down reflex which will affect breast feeding of the neonate. This finding indicates some intervention is required to enhance the let down reflex of mothers who have undergone cesarean section in terms of knowledge and skill as well as stress management, during an important phase of life.

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