

## Breastfeeding: Etiological Factors in Lactation Failure

Priyanka Mittal\*, Jayant Vagha, Priyanka Mittal

Department of Pediatrics, Jawaharlal Nehru Medical College, Datta Meghe Institute of Medical Sciences, Sawangi (M), Wardha, Maharashtra, India

### ABSTRACT

Breast milk is the most important part of early infant feeding. Promotion of breastfeeding is an effective way to reduce infant mortality. Breastfeeding success is not a woman's responsibility alone—promoting breastfeeding is a collective social responsibility, where not the mother but her family, community and also at workplace are considerate and support the feeding mother by creating an enabling environment etiological factor should be identified and various preventive measures should be taken against the incidence of breastfeeding. Because there are various etiological factors that affect the breastfeeding practice. Thus, resulting in lactation failure. A prospective observational study will be conducted in which various etiological factors will be targeted to know the cause for lactation failure in lactating mothers. Information on breastfeeding needs to be provided during prenatal visit to inform the mother concerning well-trying facts of the advantages of exclusive breastfeeding like undesirable cultural practices admire pre-milk, late initiation of breastfeeding continues to be current within the community and these ought to be discouraged for a successful diet, mother's need active support, nurturing and privacy during and after pregnancy, not only from their families and communities but also from entire health system. Breastfeeding additionally has financial advantages; it's inexpensive than buying a formula milk and allows keep away from clinical payments later as it allows equip the toddler to combat off sickness and infection. According to the UNICEF economic advantages is related to breastfeeding. Higher breastfeeding initiation and duration costs might substantially enhance the fitness of a nation. "Breastfeeding toddlers and their moms are at decrease hazard of positive illnesses. There are consequently capability fee financial savings for the broader fitness care system". In fact, it reduces each direct fees together with medical or medical institution charges and oblique fees together with components fees. Thus, breastfeeding is likewise connected to the environment. Breastfeeding the younger ones decreases the usage of uncooked material, electricity and different sources required withinside the manufacturing, packing, distributing, selling and putting off waste substances of components milk which in the long run reduces international pollution.

**Key words:** Breastfeeding, Lactation failure, Neonate, Mother, Etiological factors

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**Corresponding author:** Priyanka Mittal

**e-mail** ✉: priyankamittal2310@gmail.com

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### INTRODUCTION

Breast milk is a best food for the newborn. It is the excellent present that a mom can give to her child as it's the fundamental right of the child. It contains all the essential nutrients for the normal development and growth of a child till six months of life. The 6 months exclusive breastfeeding has a possibility to reduce under-5 mortality rate by 13 %, thus by for it is the most

effective way that is known to reduce new-born and child deaths [1]. Lactation failure or deficiency is also known as galactic is a medical condition in which there is complete lactation failure either due to insufficiency of breast milk production or due to failure of milk let-down reflex in response to suckling [2]. Thus, it is very important to identify factors that can result in Lactation failure [3]. Lactation is inspired via way of means of diverse hormones along with reproductive hormones inclusive of estrogen, progesterone, placental lactogen, prolactin, and oxytocin, and metabolic hormones inclusive of glucocorticoids, insulin, increase hormone, and thyroid. Reproductive hormones act immediately at the breast, even as metabolic hormones act circuitously at the breast via way of means of changing the endocrine response. Ductal growth of the breast is mainly controlled by growth hormone and estrogen, while the development of alveoli requires prolactin and progesterone. During

pregnancy, high levels of current progesterone inhibit the secretion process of the ductal gland. Once expulsion of placenta takes place after birth, progesterone levels drastically decline, this decreased progesterone levels trigger an increase in levels of prolactin, resulting in copious milk secretion.

The physiology of Lactation depends mainly upon two reflexes:

**Prolactin reflex** which is also known as let-down reflex or milk ejection reflex, function - by sucking at the breast the baby triggers tiny nerves in the nipple. These nerves cause hormone prolactin from anterior pituitary to be released into the bloodstream. Thus, milk-secreting cells produce milk.

**Oxytocin reflex-** Oxytocin is produced at a greater speed than prolactin. Oxytocin is secreted via posterior pituitary and acts at the breast tissue, resulting in contraction of alveoli, for this reason it makes the milk which is already inside the breast to go with the drift for the present day breast feed, and allows the infant to get the milk easily.

The oxytocin reflex is undoubtedly laid low with the emotions of the mom, consisting of lovingly considering the child, touching, smelling or seeing the child, or listening to the child cry. Due to diverse situations if the mom is emotionally disturbed or experiencing ache or pain than the oxytocin reflex doesn't paint nicely and child has hassle getting milk, that would bring about Lactation failure.

In developing countries as in India, breastfeeding is influenced by rural and urban living, cultural factors, economy and society, mental state, religious values and literacy especially the low level of maternal education and lastly the mother's employment. Whereas in contrast with developed countries, the health outcomes are different for mothers and infants who breastfeed with those who are formula fed-i.e. neonates who are not breast fed have the higher risk of infectious morbidity, childhood obesity, diabetes, leukemia and sudden infant death syndrome while the maternal factors in Lactation failure are associated with increased incidence of premenopausal breast concern, ovarian cancer, retained gestational weight gain, type 2 diabetes, MI, metabolic syndrome [4].

However, the lack of guidance is crucial etiological factors that can result in Lactation failure. Thus, obstetricians should recommend mom about the health impacts of breastfeeding on both mothers and infant.

### Background

Feeding practices in youngsters at once have an effect on the dietary fame of youngsters below two, which has an effect on infant survival.

The breastfeeding initiation rates are comparatively good but the exclusivity rates drop precipitously in the first week and months after birth.

-Ideal breast-feeding practices include the following steps:

Start breastfeeding within one hour of birth.

Exclusive breastfeeding up to 6 months of existence.

Continued breastfeeding for 2 years of life or beyond.

Introduction of suitable complementary feeding after 6 months of age.

A common question can arise in one's brain that When and how to suspect for Lactation failure. So, there are various symptoms and signs that can indicate Lactation insufficiency in mother and child.

### Symptoms

Infant is not satisfied after feeds, cries a lot.

Wants to nurse frequently.

Takes very long feeds.

Improve weight gain.

Infrequent bowel movement.

Less need to change diaper.

### Signs

Weight loss greater than 10% of the birth weight.

Not regaining birth weight up to two weeks of life.

No urinary output for 24 hours.

Absence of yellow stools in the first week.

Clinical signs of dehydration.

Thus, Lactation insufficiency should be managed clinically to lower down morbidity and mortality rates in children.

Under-5 mortality rates are still on the higher sides in India, and the reason behind newborn and child deaths is nutritional deficiency. We can truly overcome this problem by improving the breastfeeding practices among lactating mothers, by providing mothers with breastfeeding support, tools and techniques so that their confidence in their ability to breastfeed will increase. This can only be possible if we know the common etiological factors that result in locational failure. To find out the etiological factors, a prospective observational study will be conducted on lactating mothers whose infants are admitted in NICU and postnatal wards in AVBRH, Rural Hospital Wardha.

### Breastfeeding problems in mothers are

Retracted nipples

Cracked nipples

Engorged breast

Mastitis

Insufficient breast milk

Maternal medications

There is the need of an hour to prevent all the barriers that results in Lactation failure by informing pregnant women about number of benefits of breastfeeding and spreading the awareness regarding the significance of breastfeeding (Figure 1).

Following are the advantages of breastfeeding

**Breast milk**

Perfect nutrients, Protects against infection, easily digestible.

**Breastfeeding**

Helps bonding and development, enhance brain and visual development, Baby has higher intelligence quotient, Prevents Hypothermia.

**Mother**

Reduces post-delivery bleeding & anemia, delays next pregnancy, Protects obesity.

**Family**

Economic benefits, less illnesses, Family bonding.

**Society**

Eco-friendly, Human resource development, Economic development.

Breastfeeding additionally has financial advantages; it is inexpensive than buying a formula milk and allows keep away from clinical payments later as it allows equip the toddler to combat off sickness and infection.

According to the Unicef economic advantages is related to breastfeeding. Higher breastfeeding initiation and duration costs might substantially enhance the fitness of a nation. “Breastfeeding toddlers and their moms are at decrease hazard of positive illnesses. There are consequently capability fee financial savings for the broader fitness care system”. In fact, it reduces each direct fees together with medical or medical institution charges and oblique fees together with components fees. Thus, breastfeeding is likewise connected to the environment. Breastfeeding the younger ones decreases the usage of uncooked material, electricity and different sources required withinside the manufacturing, packing, distributing, selling and putting off waste substances of components milk which in the long run reduces international pollution. As we all know that breast milk is the most important part of early infant feeding. Promotion of breastfeeding is an effective way to reduce infant mortality. Breastfeeding success is not a woman’s responsibility alone – promoting breastfeeding is a collective social responsibility, where not the mother but her family, community and also at workplace are considerate and support the feeding mother by creating an enabling environment etiological factor should be identified and various preventive measures should be taken against the incidence of breastfeeding. Because there are various etiological factors that affect the breastfeeding practice. Thus, resulting in lactation. Therefore, a prospective observational study will be conducted in which various etiological factors will be targeted to know the cause for lactation failure in



Figure 1: Common barriers for lactation failure.

lactating mothers. Information on breastfeeding needs to be provided during prenatal visit to inform the mother concerning well-learned facts of the advantages of exclusive breastfeeding like undesirable cultural practices admire pre-milk, late initiation of breastfeeding continues to be current within the community and these ought to be discouraged for a successful diet, mother's need active support, nurturing and privacy during and after pregnancy, not only from their families and communities but also from entire health system.

### Aim and objective

#### Aim

To assess and evaluate the etiology influencing lactation.

#### Objectives

To study the maternal factors resulting in Lactation failure.

To study the neonatal factors leading to Lactation failure.

To assess the etiological factors due to the lack of guidance.

## MATERIAL AND METHODS

### Study design

Prospective observational study.

### Study setting

This study will be conducted neonatal Intensive care unit and postnatal wards under department of pediatrics at AVBRH, Sawangi (Meghe), Wardha, India.

### Study size

Sample of 100 lactating mothers.

### Study period

3 months.

### Inclusion criteria

The study will include the mothers who delivered babies at term with appropriate weight for gestational age.

### Exclusion criteria

Mother with term delivery, Mothers in whom breastfeeding is contraindicated.

### Method

A prospective observational study will be conducted over a period of 3 months on lactating mothers whose infants are admitted in NICU and postnatal wards in Acharya Vinoba Bhave Rural Hospital Wardha.

For the study a questionnaire consisting of 12 questions will be prepared. After obtaining a written consent, a detailed questionnaire will be asked to know the common etiological factors resulting in Lactation failure. Data regarding demographic data of mother, Obstetric details, mode of delivery, birth weight, details of antenatal advice about breastfeeding and practices,

problem encountered during breastfeeding, anatomical problem where recorded [3].

- ✓ Lactating mothers will be included in the study.
- ✓ Pre- designed questions will be asked to the Lactating mothers.
- ✓ Final outcome of the questionnaire will be recorded.
- ✓ Data will be collected and analysed.

### Statistical analysis

The data will be collected and recorded in case proforma tabulated and will be statistically analyzed to find significance of association of clinical variables with outcome using inferential statistic.

## RESULTS

Healthy Breastfeeding practices have a significant impact on the mothers and babies. Globally insufficient breastfeeding is a public health problem due to the fact using breast milk replacement will increase danger of little one morbidity and mortality in growing nations and this complement is the most common reason of malnutrition. Brain ill development and malnutrition on this important duration will cause developmental delays and suboptimal developmental outcome.

Although breastfeeding after birth is a everyday practice in India, however than to only a few kids are being placed on lactation practices straight away after birth.

### According to NFHS 3

Only 23.4% of newborn babies are put on breastfeeding within 1hr.

37% of newborn babies are put on breastfeeding on day one.

63% of the lactating moms squeeze out the primary milk from breast (colostrum) earlier than they commenced breast feeding.

Start of lactation feed is delayed by which a little one is deprived of most nutritious feed and energy that is required for the growth and development of the baby.

## IMPLICATIONS

Several initiatives should be taken to overcome the etiological factors that results in lactation failure such as:

### Baby friendly hospitals initiatives

Helping the mother to start breastfeeding in few hours after birth.

Encourage Lactation on demand.

Show Lactating mothers how to breast feed.

Inform all gravid women about benefits of breastfeeding on them as well on their babies.

### Breastfeeding Promotion Network of India (BPNI)

It is organization working towards protecting, Promotion and supporting breastfeeding which is located at New Delhi. The only goal of this organization is to enable all lactating mom to practice exclusive breastfeeding up to six month.

Likewise, more such organization should be build-up to promote and protect breastfeeding practices.

### World Breast feeding week

World Breastfeeding week is celebrated all over the globe from 1st -7th August that aims at creating and rising awareness about breastfeeding around the world.

### DISCUSSION

A Study done by Sreekantham, et al. in 2019 found that - among 100 mothers, 24 mothers are reported to have lactation failure and feeding babies with formula feeds. Among the variables taken into consideration pre-lacteal feeds, problems encountered during breastfeeding, breast diseases showed a statistically significant association with lactation failure. Mean weight gain in breastfeeding mothers and mothers with lactation failure is 11.3 kgs and 10.04 kgs respectively. Mean hemoglobin in breastfeeding mothers and mothers with lactation failure is 10.43 g/dl and 9.91 g/dl respectively. The results provide information about the relation between breastfeeding failure and its association with factors that contribute to it.

In a study found out that Total 100 children were enrolled for study out of which only 20% babies were partially breastfed and 80% were totally bottle fed. The commonest cause of lactation failure was baby's hospital admission at the time of birth due to Neonatal illness (45%) followed by maternal perception of insufficient milk production (40%). Among these, 45% babies were delivered in home while 55% were born via hospital deliveries. Almost 85% of the mothers were illiterate [5-9].

### CONCLUSION

Thus, breastfeeding is likewise connected to the

environment. Breastfeeding the younger ones decreases the usage of uncooked material, electricity and different sources required within the manufacturing, packing, distributing, selling and putting off waste substances of components milk which in the long run reduces international pollution.

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