

**A PROSPECTIVE OBSERVATIONAL STUDY ON COMPARISON OF
LATCH SCORE VS BREAST FEEDING SELF-ASSESSMENT SCALE FOR
EVALUATING BREAST FEEDING PROBLEMS**

BY

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Under The Guidance Of

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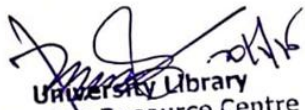
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ABSTRACT

Back ground:
Breast feeding is a vital practice that significantly contributes to neonatal health and survival. Maternal confidence and correct breastfeeding techniques are crucial for successful breastfeeding outcomes. The Breast Feeding Self Efficacy Scale-Short Form (BSELS-SF) evaluates maternal confidence, while the LATCH tool assesses the effectiveness of breastfeeding practices. While both tools are individually validated, limited studies have explored their comparative effectiveness and clinical feasibility in early postpartum assessment.

Objective:
To compare the BSELS-SF and LATCH breastfeeding assessment tools for early identification of breastfeeding problems and to evaluate factors influencing their feasibility in a clinical setting.

Methods:
A prospective observational study was conducted among 187 postnatal mothers of full-term infants delivered vaginally at K.L. Jeeppa Hospital. Both BSELS-SF and LATCH assessments were conducted within 6 hours of delivery and continued daily up to the 10th day postpartum. Maternal demographics, breastfeeding initiation time, infant weight changes, and feeding methods were documented. Correlation between the BSELS-SF and LATCH scores were analyzed along with feedback from healthcare providers regarding ease of use and time required for administration.


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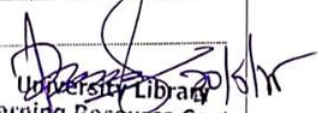
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A PROSPECTIVE OBSERVATIONAL STUDY ON COMPARISON OF LATCH SCORE VS BREAST FEEDING SELF-ASSESSMENT SCALE FOR EVALUATING BREAST FEEDING PROBLEMS ABSTRACT Back ground: Breast feeding is a vital practice that significantly contributes to neonatal health and survival. Maternal confidence and correct breastfeeding techniques are crucial for successful breastfeeding outcomes. The Breast feeding Self Efficacy Scale Short Form (BSES-SF) evaluates maternal confidence, while the LATCH tool assesses the effectiveness of breastfeeding practices. While both tools are individually validated, limited studies have explored their comparative effectiveness and clinical feasibility in early postpartum assessment. Objectives: To compare the BSES-SF and LATCH breastfeeding assessment tools for early identification of breastfeeding problems and to evaluate factors influencing their feasibility in a clinical setting. Methods: A prospective observational study was conducted among 187 postnatal mothers of full-term infants delivered vaginally at R.L. Jalappa Hospital. Both BSES-SF and LATCH assessments were conducted within 6 hours of delivery and continued daily up to the fifth day postpartum. Maternal demographics, breastfeeding initiation time, infant weight changes, and feeding methods were documented. Correlations between the BSES-SF and LATCH scores were analyzed along with feedback from healthcare providers regarding ease of use and time required for administration. Results: Both BSES-SF and LATCH scores showed a progressive increase from the initial 6 hours to day five postpartum, indicating improvement in maternal confidence and breastfeeding practices. However, statistical analysis revealed no significant correlation between the two scoring systems at any point of assessment. The LATCH score was noted to be more feasible for clinical use due to its shorter administration time and higher acceptability among healthcare providers. The majority of mothers (90.4%) were exclusively breast feeding at the time of discharge. Conclusion: BSES-SF and LATCH scores independently capture different dimensions of breastfeeding— self-efficacy and technique, respectively. Although no significant correlation was found between the two, both tools serve as valuable instruments for identifying breastfeeding challenges in the early postpartum period. Among two, LATCH score is more time-

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LIST OF ABBREVIATIONS USED

BFSE: Breast feeding-self efficacy

BSES: Breastfeeding Self-Efficacy Scale

BSES-SF: Breastfeeding Self-Efficacy Scale-Short Form

DBF: Direct breastfeeding⁵

EBF: Exclusive breastfeeding

FIL: Feedback inhibitor of lactation

GnRH: Gonadotrophin-releasing hormone

HMOs: Human Milk Oligosaccharides

LATCH: LATCH breast feeding assessment score

LSCS: Lower Segment Cesarean Section...

MBSSES - SF: Maternal Breast Feeding Self Assessment Short Form

ROC: Receiver operating characteristic

AUC: Area under the curve

SD: Standard Deviation

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PROSPECTIVE OBSERVATIONAL STUDY ON COMPARISON OF LATCH SCORE VS BREAST FEEDING SELF-ASSESSMENT SCALE FOR EVALUATING BREAST FEEDING PROBLEMS

ABSTRACT

Back ground:

Breast feeding is a vital practice that significantly contributes to neonatal health and survival. Maternal confidence and correct breastfeeding techniques are crucial for successful breastfeeding outcomes. The Breast feeding Self Efficacy Scale–Short Form (BSES-SF) evaluates maternal confidence, while the LATCH tool assesses the effectiveness of breastfeeding practices. While both tools are individually validated, limited studies have explored their comparative effectiveness and clinical feasibility in early postpartum assessment.

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To compare the BSES-SF and LATCH breastfeeding assessment tools for early identification of breastfeeding problems and to evaluate factors influencing their feasibility in a clinical setting.

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Results:

Both BSES-SF and LATCH scores showed a progressive increase from the initial 6 hours to day five postpartum, indicating improvement in maternal confidence and breastfeeding practices. However, statistical analysis revealed no significant correlation between the two scoring systems at any point of assessment. The LATCH score was noted to be more feasible for clinical use due to its shorter administration time and higher acceptability among healthcare providers. The majority of mothers (90.4%) were exclusively breast feeding at the time of discharge.

Conclusion:

BSES-SF and LATCH scores independently capture different dimensions of breastfeeding-self-efficacy and technique, respectively. Although no significant correlation was found between the two, both tools serve as valuable instruments for identifying breastfeeding challenges in the early postpartum period. Among two, LATCH score is more time-efficient and practical for routine clinical use. Incorporating structured assessment tools and providing continued breastfeeding support can enhance early breastfeeding success and maternal-infant bonding.

INTRODUCTION

INTRODUCTION

Breast feeding is contemplated as an essential intervention to bring down both the infant mortality as well as the under-5 death rate. Even though breastfeeding is a normal process, some moms and babies may have trouble with it, especially in the days after giving birth. Improper breast-feeding technique may lead to poor feeds that cause severe loss of weight, hypernatremic dehydration, jaundice, and having to be hospitalized again. If breast feeding is started early in hospitals and newborns are fed exclusively on breast milk at hospitals itself, then, the chances of continuing breastfeeding alone for the next 6 months are extremely high.

Institutional deliveries are promoted by each and everyone. During the initial hospitalization days health care workers has the opportunity to evaluate breastfeeding, educating mothers on accurate breastfeeding procedures and increase their poise in breastfeeding.¹

Breast feeding-self efficacy (BFSE) was identified as a critical aspect which impacts the success of breast feeding throughout the post delivery period. In early postpartum period, health care professionals should evaluate the adequacy of breast feeding in light of factors such as poor newborn nipple attachment, sluggish suckling by the newborn, a reduction in the regularity of breast feeding, milk duct issues, and parting of the newborn from its mother. It has been documented that the initiation of breastfeeding is correlated with maternal self-assurance and positive intentions to breastfeed. The BFSE scale can be employed as an identification instrument in initial post-delivery stage to distinguish between moms who are liable to flourish in breast feeding and among who require supplemental intervention to confirm its continuance. Assessing BFSE on the first post-delivery day is crucial for the recognition of ladies who are at risk of discontinuing breastfeeding. When a woman has faith in her own abilities, she is more likely to see her breastfeeding efforts as successful and to see positive results. BFSE detection in the early post-delivery period, particularly among low

SES women, is expected to facilitate the early identification of potential issues and the prevention of breast feeding interruption. Consequently, the prevention of breast-related complications, the enhancement of maternal-infant attachment, the reduction of neonatal morbidity and mortality, and the early initiation of breast feeding are all beneficial.²

Poor lactation is significantly influenced by psychosocial factors. This covers "depression or anxiety during pregnancy, stressful life events during pregnancy and or postpartum and low levels of social supports". Poor attachment, incorrect posture or inadequate baby feeding habits may all cause poor milk transfer.

Excessive weight loss beyond the allowable 10% in newborns can lead to serious, potentially life-threatening complications such as hypernatremic dehydration, as well as hypoglycemia and neonatal jaundice. This in turn prolongs hospital stay and is a significant factor in readmission.³

Nursing attitude is defined as the belief, knowledge, and information ideas that women consistently display in relation to a psychological object allocated to them throughout the development of their nursing behavior. There was evidence that women's BFSE levels, employment status, and family economic adequacy were determinants of their breastfeeding performance.⁴

There are various studies that looked into BSFE scoring and Latch score separately. But there is a dearth of studies that compared the efficacy of both the scores in finding out breast feeding problems. This study was conducted to fill that gap that exists in the comparison of the efficacy of both the scores in finding out the breast-feeding problems. With this study we also tried to find out the factors that can contribute to affecting the feasibility of both the scores in identifying the problems by a health care provider.

AIMS & OBJECTIVES

OBJECTIVES OF THE STUDY

1. Maternal Breast Feeding Self Assessment Short Form (MBSES - SF) will be used for clinical evaluation of breast-feeding mothers within 6 hours of early post-partum period till five days after birth.
2. LATCH breast feeding assessment score will be used for clinical evaluation of breast-feeding mothers during the first five days after birth.
3. Comparison of Maternal Breast Feeding Self Assessment Short Form vs LATCH breast feeding assessment score for early identification of breast feeding problems
4. To study the factors affecting the feasibility of BSES-SF & Latch score by health care provider

REVIEW OF LITERATURE

REVIEW OF LITERATURE

Breastfeeding is a crucial aspect of the early stages of a child. Breastfeeding offers complete dietary sustenance as well as fosters the expressive attachment of the infant to the caregiver. An intense emotional connection promotes the effective extension of breastfeeding.⁵ Breast milk is recognized as the ideal and sole source of nutrition for infants from birth until six months of age. Overall, it plays a vital role in healthy growth and development.⁶

Breast milk is a rich and ever changing fluid that offers both comprehensive nutrition and immune support for infants. Its major components include:

1. Macronutrients

- Carbohydrates, primarily lactose, which not only helps the body absorb calcium but also gives energy.
- Proteins:
 - Whey proteins (e.g., lactoferrin, α -lactalbumin, immunoglobulins) – easier to digest.
 - Casein – forms curds in the stomach, slower digestion.
- Fats: Essential for energy, brain development, and absorption of fat-soluble vitamins.

Includes:

- Triglycerides
- Cholesterol
- Phospholipids
- Essential fatty acids (like DHA and ARA)

2. Micronutrients

- “Vitamins: A, D, E, K (fat-soluble); B-complex, C (water-soluble)”.
- Minerals: Sodium, potassium, calcium, magnesium, phosphorus, iron, zinc.

3. Immunologic Components

- Secretory IgA: Protects mucosal surfaces.
- Lactoferrin: Binds iron, inhibiting bacterial growth.
- Lysozyme: Enzyme that destroys bacteria.
- Cytokines, chemokines, and growth factors: Modulate the immune response.
- Leukocytes: Living cells (macrophages, neutrophils, lymphocytes) that provide active immunity.

4. Other Bioactive Components

- Hormones: Prolactin, leptin, adiponectin, insulin, cortisol.
- Enzymes: Lipase (helps fat digestion), amylase.
- Human Milk Oligosaccharides (HMOs): Complex sugars that promote healthy gut flora and protect against pathogens.
- MicroRNAs: Regulate gene expression and development.
- Stem cells: Found in breast milk; exact roles are still under research.

5. Water

- Breast milk is about 87% water, keeping infants well-hydrated without the need for additional fluids.

Breast

The breast anatomy comprises:

“The nipple and areola”,

“Breast tissue”,

Connective tissue

“Adipose tissue”,

“Blood and lymphatic vessels”,

Nerves.^{7,8}

The breast tissue comprises alveoli, tiny sacs composed of milk-producing cells, and channels helping in transport milk externally. In the time between feedings, milk builds up in the alveolar lumen and ducts. Surrounding “the nipple” is the coloured round areola, that has Montgomery's glands. While also producing the mom's own smell that draws her child to the breast, these glands release a lipid secretion protecting the nipple and areola during breastfeeding. During feeding, when the oxytocin reaction is triggered, the ducts under “the areola” enlarge and satisfy with milk.

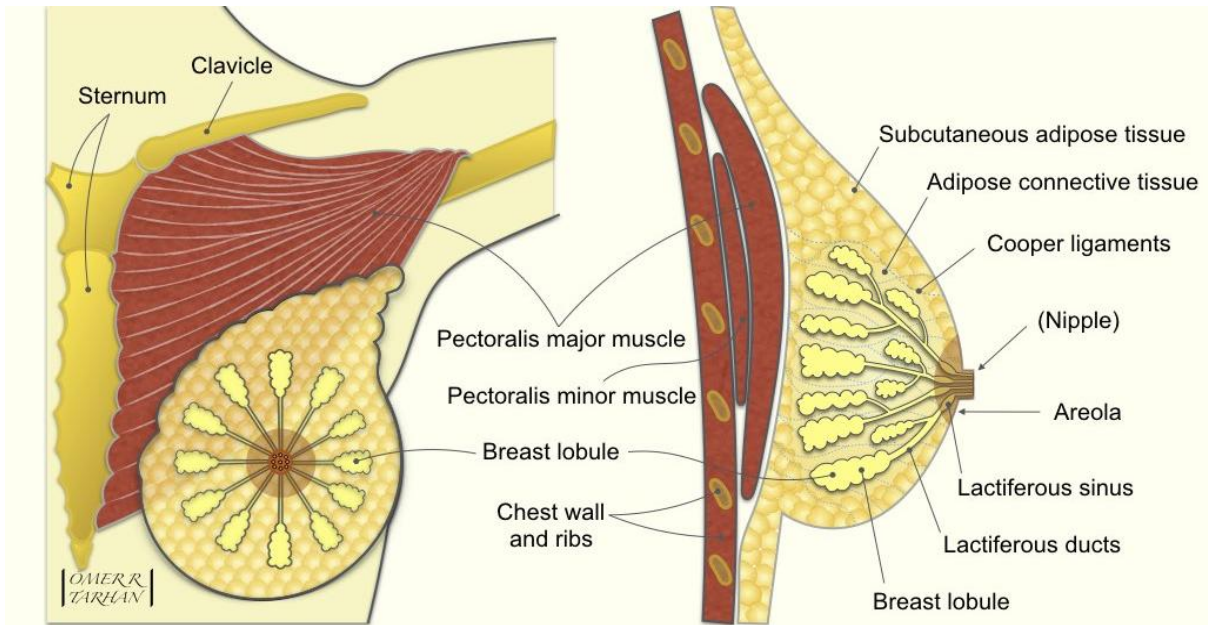


Figure 1: Extend of Breast

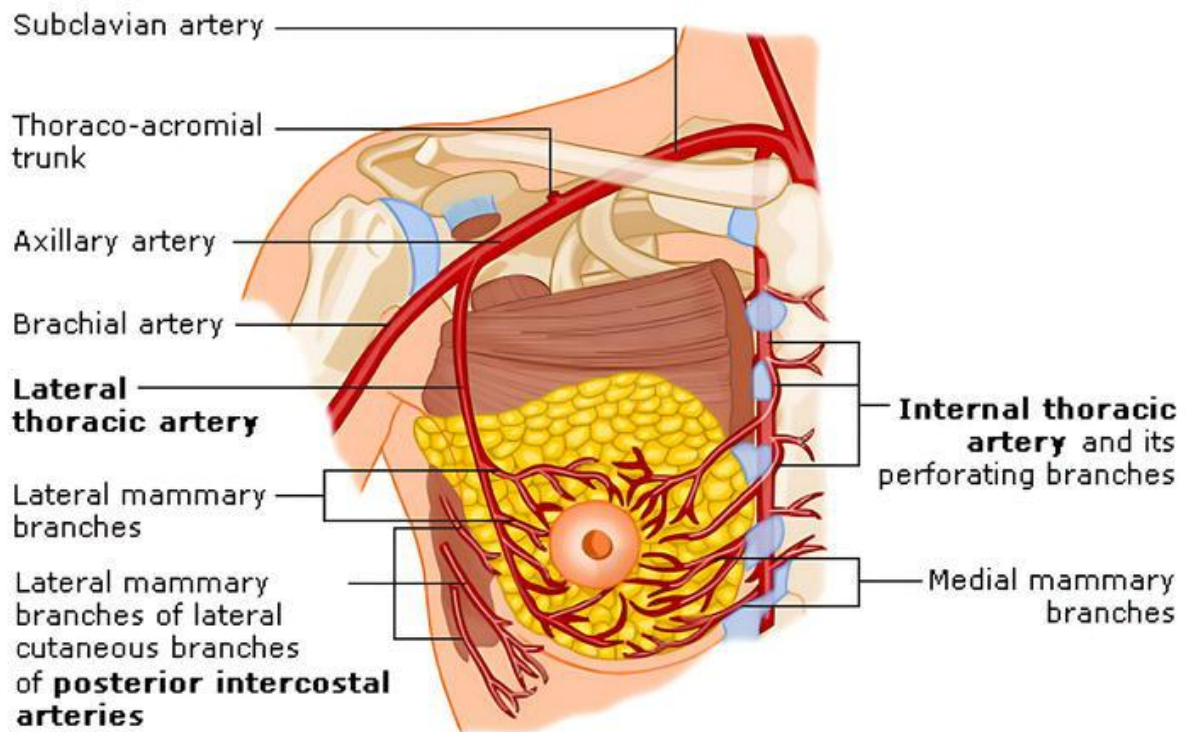


Figure 2: Arterial supply of Breast

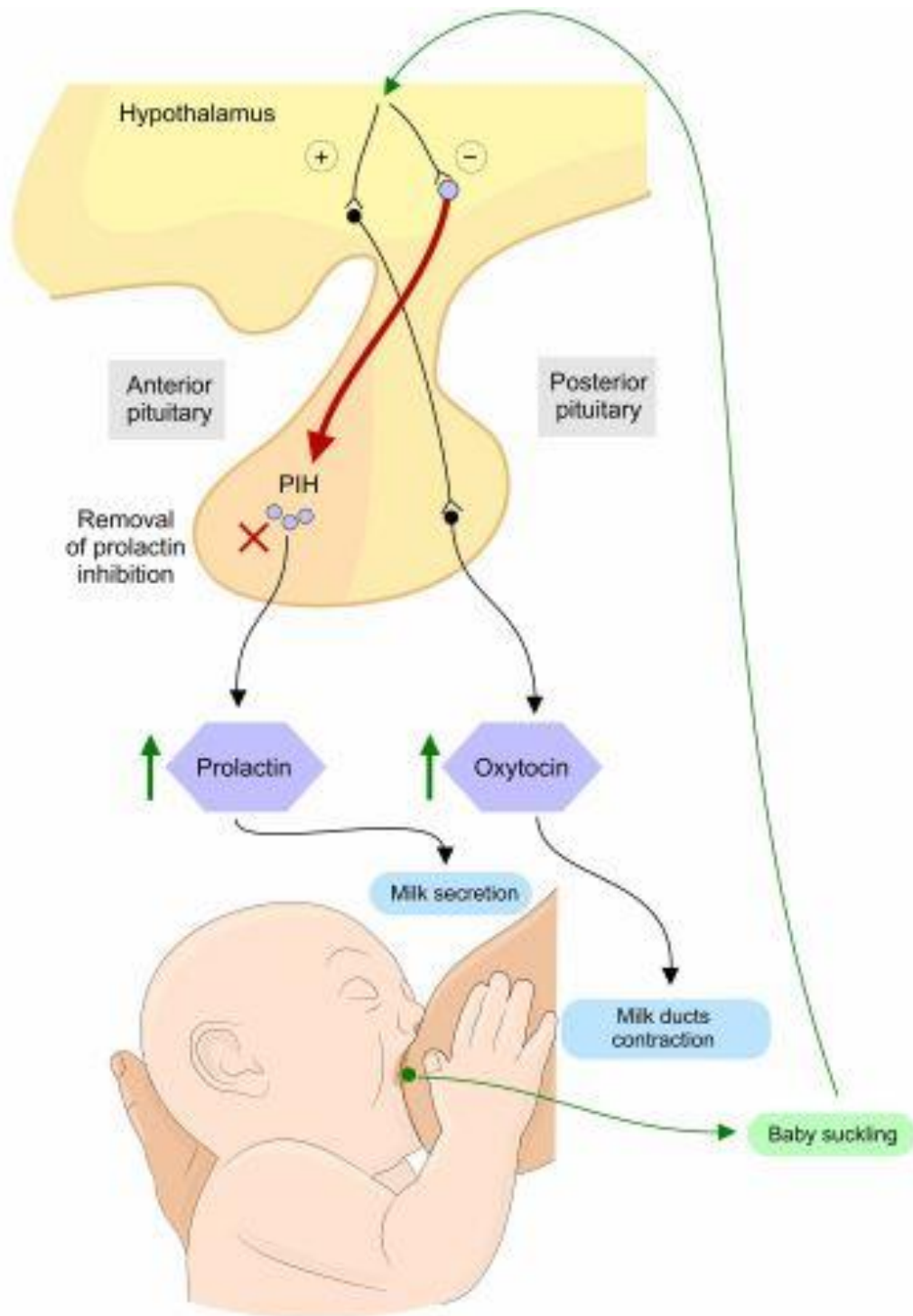


Figure 3: Milk secretion and regulation

Hormonal control

“Prolactin and oxytocin are two hormones that directly affect nursing”. Lactation is also influenced indirectly by many other hormones, including oestrogen⁹. “Sensory impulses go

from the nipple to the brain when a baby suckles at the breast”. The posterior lobe of the pituitary gland releases oxytocin, while the anterior lobe is responsible for producing prolactin. Alveolar cells' milk production depends on prolactin. Progesterone and oestrogen levels drop quickly after delivery, prolactin suppression stops, and nursing starts.

Suckling raises blood prolactin levels, which therefore promotes alveolar milk production. Since prolactin levels peak around 30 minutes after feeding starts, its main role is to enable milk production for the following feedings.¹¹ In the first several weeks, more suckling and nipple stimulation by the baby cause more prolactin production, which causes more milk synthesis. This impact is particularly noteworthy at the onset of breastfeeding. Although prolactin is still necessary for breastfeeding, the relationship between prolactin levels and milk supply declines after several weeks. On the other hand, lactation might also stop if the mother stops nursing, therefore ending milk production.

Prolactin production increases nocturnal time, that in turn helps the nocturnal breastfeeding remarkably favourable for preserving milk supply. This hormone appears to induce relaxation and drowsiness in mothers, allowing for adequate rest despite nighttime feeding. “Suckling affects the release of more pituitary hormones including gonadotrophin-releasing hormone (GnRH), follicle-stimulating hormone, and luteinizing hormone, which in turn suppresses ovulation and menstruation.” Regular nursing may thus very successfully delay a next pregnancy. Maintaining this impact depends on nighttime nursing.

Oxytocin

“Oxytocin causes the myoepithelial cells surrounding the alveoli to constrict. This makes the milk, stored in the alveoli, run and fill the channels.¹² Occasionally, the milk is expelled in slender jets.”

The oxytocin response is occasionally mentioned to as the "letdown reflex" or the "milk ejection reflex."

Oxytocin is triggered while a mother thinks likely feeding and throughout the infant's nursing. The response develops accustomed to the mother's stimuli and feelings, including touch, olfactory, or visual communications with the infant, auditory recognition of the baby's cries, or affectionate contemplation of the child. In instances of intense physical hurt or emotional concern, the oxytocin reaction can be suppressed, thereby causing a rapid cessation of effective milk production.

“Understanding the oxytocin reaction is crucial, as it elucidates the necessity for the maternal and newborn bonding as well as the engagement of skin-to-skin contact.”

Oxytocin induces uterine contractions post-delivery and aids in minimizing haemorrhage. The contractions may induce intense uterine pain when an infant suckles in the initial period.

Oxytocin reflex

The common indicators that demonstrate the activation of the reflex:

- A tingling feeling prior to or during feeding.
- Milk emanating upon contemplating the infant or hearing his cries.
- Milk emanating from the opposite breast during the infant's nursing.
- Milk streaming upon interruption of nursing.
- Sluggish, as well as deep sucks and consuming by the infant, indicating milk is entering the oral cavity.
- Uterine discomfort or haemorrhage.
- Thirst experienced while feeding.

If one or more of these indicators are evident, the reflex is functioning. Nonetheless, their absence does not imply that the reaction is inactive. The indications may be subtle, and the mother may remain oblivious to them.

Oxytocin exerts significant psychological effects and is recognized for its influence on maternal activities in animals. In people, it elicits a mood of tranquillity and diminishes stress.¹³ This hormone can augment emotions of fondness between mother and newborn and facilitate attachment. Beneficial tactile interactions promote the release of both the hormones, while skin contact between mother and infant postnatally facilitates both lactation and attachment.^{14,15}

lactation feedback inhibitor

“A polypeptide present in breast milk, the feedback inhibitor of lactation (FIL), a protein controls milk production in the breast.¹⁶ Especially if a baby only suckles from one side, sometimes one breast stops producing milk while the other continues.” Each breast's internal milk production is autonomously controlled, therefore this. Should milk not be ejected, the inhibitor builds up and stops the cells from further production, therefore protecting the breast from the negative properties of too much fullness. Breast milk expulsion removes the inhibitor, hence enabling production to start up again. Expression allows for milk extraction if the child can't suck.

FIL controls milk production to fit the baby's demands by using the baby's consumption as a guide. After breastfeeding is started, this system is very vital for ongoing control. Prolactin is now absolutely necessary to enable milk release; nonetheless, “it does not control the amount of milk produced”.

Baby reflexes

Effective nursing depends on the baby's reflexes. Rooting, suckling, and swallowing are the main reflexes. "Around the 32nd week of pregnancy", the rooting reflex develops. A newborn's palate is touched by an item; the baby starts sucking. This is the reflex of sucking. "He or she drinks when the baby's mouth is full with milk. This is the reflex of swallowing." At around 28 weeks of gestational age, preterm neonates can grip the nipple; by 31 weeks, they can suckle and draw some milk. Between 32 and 35 weeks of gestation, suckling, swallowing, and breathing coordinate. "At that age, babies can only suckle for a short time; nonetheless, a cup allows them to get more meals. Most babies can fully nurse at a gestational age of 36 weeks."¹⁷

Knowing these reflexes is very vital as their development stage will decide whether the baby can nurse directly or needs a temporary alternate feeding plan.

Attachment and suckling

A baby has to be properly connected so that he or she can suckle successfully, therefore stimulating the nipple and draining milk from the breast.¹⁸ Problems might arise when a baby doesn't correctly get the breast into his or her mouth, hence preventing successful suckling.

Good attachment

The main things to notice are: Much of the areola and the underlying tissues, notably the major ducts, are placed in the baby's mouth.

With the nipple making up only one third of the 'teat', the breast is stretched to form a long 'teat'.

The newborn is sucking from the breast instead of the nipple; his tongue is anteriorly positioned over the lower gums, under the milk ducts (the tongue is really cupped around the lateral sides of the 'teat', but a drawing cannot show this).

Mostly to lengthen the breast tissue and keep it within the mouth, the babies employ suction. While the baby's tongue presses to move the milk from the ducts into the baby's mouth, the oxytocin response helps the breast milk flow through the ducts. A baby's lips and tongue don't annoy or harm the nipple and areola skin when he is correctly latched. For the mother, suckling is both pleasant and often comfortable. She feels no suffering.

Poor attachment

The salient points to observe are:

Only the nipple is in the infant's mouth, excluding the underlying breast tissue or ducts; the infant's tongue is positioned within the mouth and cannot exert pressure on the ducts.”

The indicators of poor attachment are:

If an infant's mouth is not wide open and the lower lip appears to be curled inward or sticking out, it may point to a poor latch. A chin that is not close to the breast and tilts away can also result in weak or ineffective sucking.

In such instances, it is important to reassess and correct the baby's latch and position, especially if the mother experiences discomfort during feeding or the baby shows signs of inadequate milk intake.

While sometimes a significant portion of the areola remains visible during feeding, this alone is not a definitive sign of poor attachment. However, the distribution of the visible areola—particularly when more is seen below the lower lip or visibility is equal above and below—can serve as a more reliable indicator of latching difficulties.

Effective nursing

When a newborn is properly latched onto the breast, the baby can suckle efficiently. Indicators of proficient lactation demonstrate that milk is entering the infant's mouth. The infant engages in slow, deep suckling, accompanied by a discernible gulp around once per second. Occasionally, the infant halts for several seconds, permitting the ducts to replenish with milk. Upon resuming suckling, the infant may initially nurse rapidly several times to stimulate milk flow, followed by slower, deeper, deeper suckles. The infant's cheeks remain plump throughout feeding.

As the feeding concludes, suckling typically diminishes, characterized by a reduction in deep suckles and extended intervals between them. This period is characterized by a reduced volume of milk; nonetheless, because to the high lipid content of hindmilk, it is crucial to maintain feeding. Upon satisfaction, the infant typically disengages from the breast autonomously. The nipple may appear elongated momentarily, but it swiftly reverts to its original shape.

Signs of ineffective suckling

An inadequately bonded infant is prone to nurse ineffectively. The infant may suckle rapidly without swallowing, and the cheeks may be indented during suckling, demonstrating defective milk movement into the mouth. Upon cessation of nursing, the nipple sometimes remain elongated and appear compressed laterally, exhibiting a pressure line at the apex, indicative of trauma due to improper suction.

Consequences of ineffective suckling

Ineffective suckling by an infant result in poor milk transport from mother to baby. Consequently:

The breast may have engorgement, due to inadequate milk removal; the infant's breast milk consumption may be inadequate, leading to inadequate weight gain.

Baby might show notable hunger and keep sucking for an extended time or eat often.

The breasts may experience overstimulation from excessive suckling, leading to an oversupply of milk.

Reasons for bad attachment

The usage of a feeding bottle prior to establishing effective breastfeeding can result in inadequate attachment, as the suckling process contrasts involving the two methods. Functional challenges, such as flat or overturned nipples, or a diminutive or feeble newborn, contribute to inadequate bonding. Nonetheless, the primary factors are the mother's inexperience and the absence of proficient assistance from the attending healthcare professionals. Numerous moms require expert assistance in the initial days to guarantee proper attachment and good suckling by the infant. Healthcare professionals must possess the requisite expertise to provide this assistance.

Setting the mother and infant for proper connection

For optimal breastfeeding, both the infant and the mother must be correctly positioned. Numerous jobs exist for both, although certain essential principles must be adhered to in each role.

Maternal position

At her option, the mother may be sitting, reclining, or standing. But, particularly on her back, she must be calm and comfortable, free of any tension. "Should she be sitting, her back has to be supported; she should be able to place the baby to her breast without hunching forward."

“The baby may nurse in several positions in relation to the mother: across her chest and belly, under her arm, or alongside her body.”

“Four important features of the baby's body position call for examination regardless of the mother's posture and the baby's general orientation in relation to her.”

The baby's body has to stay straight, free of any bends or twists. Gently stretching the baby's head at the neck will help the chin to go closer to the breast.

“The person should face the breast. Often pointing somewhat down, the nipples indicate that the baby should not be lying flat on the mother's chest or tummy but rather moved somewhat onto their back to provide view of the mother's face.”

“The baby's body should be close to the mother to enable effective latching via closeness to the breast.”

Support must be given to the whole body. The mother's lap or the bed may all be used to place the baby. She should not just assist the baby's neck and head. Grasping the baby's bottom might lead to lateral movement, so she should avoid doing so as it would impede the baby's capacity to place his or her tongue and chin under the areola.

Breastfeeding pattern

To guarantee sufficient milk creation and stream for 180 days of complete breastfeeding, an infant must nurse as frequently and for as long as desired, both morning and night.¹⁹ The practice is referred to as “demand feeding”, “unfettered feeding”, “baby-led feeding”.

Every feeding, baby drink milk ranging from 440 to 1220 ml, mother-infant couples' 24-hour milk intake averages around 800ml/ day for the first six months.²⁰ Babies that feed on demand depending on their hunger get the required nutrients for sufficient development. Though they don't completely empty the breast, they do take 63 to 72% of the available milk.

Consistent extraction of excess milk shows the baby stops feeding because of fullness rather than an empty breast. “Still, breasts seem to vary in their milk storage capacity. Women with less storage capacity may have babies who need more regular feedings to properly draw milk and ensure enough daily intake and output”.²¹

Consequently, one of main factor is never to limit the length or occurrence of feedings, if the infant is properly latched on. Nipple injury results from inadequate attachment rather than extended feeding sessions. “The mother slowly understands to react to her baby's signals of hunger and willingness to feed, like agitation, rooting, or sucking on hands, prior to the onset of crying.” The infant should be permitted to continue breastfeeding until he or she voluntarily detaches from the nipple. Following a little respite, the infant may be presented with the opposite breast, which he or she may accept or decline.

If an infant remains latched to the breast for an extended duration (exceeding thirty minutes per feeding) or requests to feed with excessive frequency (greater than every 1 to 1½ hours), it is essential to assess and enhance the infant's latch. Extended and frequent feeding may indicate inadequate suckling and insufficient milk delivery to the infant. This is typically attributable to inadequate attachment, which may also result in nipple soreness. Improved attachment enhances milk transfer efficiency, perhaps resulting in shorter or less frequent feedings. The danger of nipple injury is concurrently diminished.

The Breastfeeding Self-Efficacy Scale (BSES)

“Although the advantages of human milk for babies have long been acknowledged, many studies published in the last ten years have clearly shown that nursing lowers mortality and morbidity in the first year of life in both developing countries and North America and Europe”.²² Many national and international groups now actively support nursing. “Advocating for exclusive breastfeeding for the first six months, continuous breastfeeding

during the introduction of complementary foods throughout the first year, and continuation for as long as desired by both mother and baby thereafter, the American Academy of Paediatrics and the Canadian Paediatric Society (1998)”.^{23,24} The WHO confirmed in May 2001 that babies all over should be only breastfed for six months.²⁵ Perhaps as a consequence of this active public campaigning, the percentages of breastfeeding starting in North America have significantly increased throughout the 1960s²⁶ National polls show Canadian starting rates to be around 79%, compared to American rates that climbed from 59.7% in 1995 to 64% in 1998.²⁷ In the Indian subcontinent, the proportion of mothers initiating breast feeding within the first hour after childbirth increased significantly—from 25% in 2005–06 to 42% by 2019–21., whereas the percentage of mothers who nursed their babies before lactation fell from 57% to 15% in the same time period.

Sadly, in the first four to eight weeks postpartum, breastfeeding rates drop quickly. Less than 35% of Canadian moms are exclusively nursing at four months; just 29% of U.S. mothers and 30% to 40% of Canadian mothers keep any kind of breastfeeding going until six months postpartum.^{28,29} Socially disadvantaged moms had considerably lower rates of breastfeeding duration.^{30,31} A study carried out by Bala et al. in 2020 in northern India found that 89.9% of mothers were breastfeeding their infants, but only 42.7% practiced exclusive breastfeeding. A study by Dhimi et al. in 2021 reported that 58.7% of mothers practiced exclusive breastfeeding, while 43.8% initiated breastfeeding early after delivery. The reason for this significant decrease in breastfeeding is a complicated interaction of circumstances.³² In their Baby-Friendly Hospital Initiative, the World Health Organization and UNICEF outlined 10 actions to ensure that medical practitioners provide adequate breast feeding support.³³ Equally important, however, is help upon hospital release. “Still, many of the well-known predictors are nonmodifiable demographic variables like mother age, marital status, educational level, and socioeconomic position.”³²

In the prospective study involving 64 ladies, Ertem et al. discovered that pregnant females who exhibited a lack of confidence in their breastfeeding capabilities were more inclined to cease breastfeeding before 2 weeks post-delivery.³⁴

Buxton et al., similarly discovered that around 27% of females exhibiting low mother breastfeeding self-assurance during the perinatal time ceased nursing within the first post delivery week, in contrast to merely 5% of females with high self-confidence ($p < .001$).³⁵ Females who had a lower assurance were 4 to 5 times as expected to experience "failure" in breastfeeding.

In the research including 198 pregnant ladies, O'Campo et al., analyzed various psychological, social and demographic variables, concluding that mothers belief was a chief component influencing the expected duration of breastfeeding.³⁶ Consequently, women with diminished confidence in their nursing capabilities had a 3.1-fold increased risk of hastily ceasing breastfeeding in comparison to women with high confidence in breastfeeding.

The trust in nursing following childbirth is equally significant. Papinczak et al., discovered in a research involving 159 females from Brisbane that those females among the study population could not initiate lactation exhibited markedly diminished nursing confidence compared to those who nursed for over 6 months.³⁷ A research utilizing in-depth interviews revealed that a fall in nursing certainty throughout the early post-delivery period significantly influenced the choice to discontinue breastfeeding.³⁸ A mother's confidence in breastfeeding is often influenced by the perception of not producing enough milk.³² "Hill and Humenick utilized the H & H Lactation Scale to assess insights of inadequate milk supply, revealing that mothers with diminished scores on the Maternal Confidence/Commitment subscale exhibited reduced BF rates at 6 weeks post-delivery".³⁹ Segura-Millan et al., discovered that BF confidence correlated with mothers insights of inadequate milk supply after 7 days post

delivery; mothers exhibiting greater BF assurance had a diminished risk of prematurely ceasing BF.⁴⁰ . To enhance the theoretical advancement of BF certainty and inform successful supporting involvements, Dennis established the BFSE theoretical framework grounded in social cognitive theory proposed by Bandura.^{41,42}

“Lately, self-efficacy has become a well-known predictor of health-related behaviors. Defined by Bandura, self-efficacy is the belief of a person in their perceived capacity to carry out a certain activity or conduct”.⁴² “It consists of two parts: (a) outcome expectancy, the belief that a particular behaviour will produce a certain result, and (b) self-efficacy expectancy, the individual's confidence in their capacity to effectively carry out particular activities or behavior to reach the desired result”.⁴² People’s beliefs about their own effectiveness shape their actions, the amount of effort they invest, their persistence in facing challenges, and their tendency to adopt either discouraging or motivating thoughts. This confidence determines her decision to breastfeed, how much effort she dedicates, her perseverance in striving for success, the nature of her thought patterns—whether positive or negative—and her emotional response to difficulties encountered during breastfeeding.⁴¹

Bandura identified four main information sources in evaluating self-efficacy: (a) performance achievements , (b) “vicarious experience”, (c) verbal encouragement, (d) physical responses.⁴¹ A mother's nursing self-usefulness is influenced by her prior breastfeeding experience, her observation of effective BF practices by others, and the encouragement she receives from important individuals in her life. Moreover, her present physiological and emotional condition, encompassing weariness, worry, and anxiety, serves as a significant source of information for assessing her breastfeeding capability. Healthcare practitioners can enhance a mother's Breast feeding confidence by affecting the bases of the self-efficacy knowledge.⁴²

Bandura promoted a behaviour-precise methodology for examining self-efficacy, contending that a generic self-efficacy assessment of overall capability is insufficient for evaluating a person's effectiveness in executing errands related to a particular behaviour.⁴¹ Consequently, an instrument tailored to the tasks related to breastfeeding is required to assess nursing self-efficacy. A thorough literature analysis revealed no obvious use of self-efficacy belief in assessing nursing confidence. Consequently, “the Breastfeeding Self-Efficacy Scale” was created and subjected to psychometric evaluation.⁴¹

“The Breastfeeding Self-Efficacy Scale (BSES)” was created by Dennis and Faux in 1999.⁴¹ This instrument has 33 self-directed pieces, each prefaced with the statement “I can always” and evaluated on a 5-point Likert scale. The total scores may vary from 33 to 165, with elevated values indicating more nursing self efficacy.

Breast feeding Self Efficacy Scale- Short form (BSES – SF)

“In the year 2003, Dennis modified the BSES, reducing it from 33 to 14 components and re-branded it as the BSES-Short Form (BSES-SF)”⁴³ The instrument shown satisfactory reliability and validity in the USA⁴⁴ Canada⁴⁵ Brazil⁴⁶ the UK⁴⁷ Spain⁴⁸ Italy⁴⁹ Sweden⁵⁰ Poland⁵¹ Croatia⁵² Portugal⁵³ Turkey⁵³ China⁵⁴ Japan⁵⁵ Malaysia⁵⁶ and Hong Kong⁵⁶

Components of BSES-SF mother includes:

LATCH breast feeding assessment tool⁵⁷

The LATCH assessment tool, made up of five distinct components, is connected to the APGAR scoring system. It serves as a detailed and organized method to evaluate a mother's breastfeeding ability.

The acronym LATCH stands for:

L — the effectiveness of the baby’s latch on the breast,

A — the frequency of the baby’s swallowing,

T — the nipple’s shape and type,

C — the level of comfort experienced by the mother,

H — whether the mother requires assistance in holding the baby while breastfeeding.

An overall score below 10 suggests the mother needs help; the overall score from assessing breast feeding is 10.

Table 1: LATCH charting system

Parameters	0	1	2
L: LATCH	“Too sleepy or reluctant, no latch achieved”	“Repeated attempts hold nipple in mouth stimulate suck”	“Grasps breast, tongue down lips flanged rhythmic suction”
A: AUDIBLE SWALLOWING	None	“A few with stimulation”	“Spontaneous and intermittent <24 hours Spontaneous and frequent >24 hours old”
T: TYPE OF NIPPLE	“Inverted”	“Flat”	“Everted (after stimulation)”

C: COMFORT	“Engorged cracked, bleeding, large blisters, or bruises. Severe discomfort”.	“Filling reddened/small blisters or bruises mild/moderate discomfort”	Soft , non-tender
H:HOLD(positioning)	“Full assist (Staff holds infant at breast)”	“Minimal assist (i.e., elevate head of bed; place pillows for support.) Teach one side; mother does other side. Staff holds and then mother takes over”	“No assist from staff mother able to position/hold infant”

Similar studies

In a longitudinal study conducted by **Rapheal et al.**, during 2023, they studied early BF problems using LATCH scores. Breastfeeding issues were assessed using the LATCH score 6-12 hours post-delivery, and the study team intervened by offering reinforcement, support, and coaching for mother. “LATCH scores” re-evaluated at 24 to 48 hours. In this study of 400 mothers, almost all (99.7%) needed “assistance in positioning the neonate”, half the group had inadequate latch, and around 10.0% experienced nipple complications throughout the preliminary evaluation. Reassuring strategies for breastfeeding enhanced the LATCH score. They concluded that, LATCH is an extensive yet straightforward instrument for

identifying breastfeeding issues. Due to the prevalent happening of nursing difficulties in the early post delivery phase, a methodical evaluation of breastfeeding-related issues utilizing the LATCH instrument might facilitate prompt intervention and enhancement of breastfeeding techniques.⁵⁸

In a descriptive study performed by **Gerçek et al.**, during 2017, they investigated the association between BFSE and LATCH scores in Turkish females. The primary inference of study indicated a dim optimistic link between the both the scores among postpartum females. Women who fell “pregnant four times or more” showed notably greater average performance on the “LATCH” and “Breastfeeding Self-Efficacy Scale-Short Form”. “Women married for eleven years or longer and moms who started nursing within thirty minutes of delivery also showed notably greater average LATCH scores as well”. They decided that “timely identification of breast feeding related issues relies on midwives and obstetric nurses consistently assessing both breast feeding self efficacy and mother's ability to breast feed.”²

In a cross-sectional study performed by **Ozkul and others.**, during 2018, they wanted to ascertain the association between maternal BFSE and nipple pain/trauma. A questionnaire was employed to assess the informative qualities of pregnant individuals, while the above mentioned scales were utilized to evaluate breastfeeding efficacy. The 'Nipple Pain and Trauma' scale was implemented to ascertain nipple pain and distress in pregnant mothers. According to the BSES, although all mothers perceive themselves as 'efficacious' in BF, an evaluation using the LATCH scale revealed that 83.8% are deemed 'inefficacious' and do not adhere to proper breastfeeding techniques. Furthermore, it was established that 77.0% of puerperants employing improper nursing techniques experience nipple chapping.⁵⁸

Another study was conducted by **Economou et al.**, in 2021. A longitudinal methodological study involving 586 participants, conducted in association with "BrEaST Start in Life"

initiative. BSES was evaluated 2 to 3 days postnatally and at 30 days. The relationship between breastfeeding self-efficacy (BSES) and breastfeeding was analyzed using logistic regression, while the predictive accuracy of the assessment was measured through ROC curve analysis. The BSES exhibited a mean of 3.55 (SD = 0.85), indicating a moderate level, which was lower among Cypriot women, first pregnant ladies, and those who underwent LSCS. The 14 items exhibited strong internal consistency, and factor assessment indicated a two-component composition. Women who began exclusive breastfeeding had higher BSES scores compared to those who practiced non-exclusive breastfeeding or did not breastfeed at all.⁵⁹

In the case control study by **Jayaraj et al.**, during 2020, the objective was to identify the risk influences associated with a weight loss above 10% in term and late preterm infants who were exclusively breastfed. The study included exclusively breastfed newborns born at or after 8 months of gestation who lost more than 10% of their birth weight within the first two weeks. Each group had 53 participants with similar baseline characteristics. The researchers concluded that a lack of early skin-to-skin contact and lower LATCH scores were key factors contributing to significant weight loss in these exclusively breastfed infants.³

In a 2021 cross-sectional study by Mercan et al., the researchers examined the connections between breast feeding self efficacy, depression, social support, and attitudes toward breastfeeding in the early postpartum period. The study included 398 women aged 15 to 49 within the first 42 days after childbirth. The findings indicated that increased depression levels after delivery are associated with reduced breastfeeding self-efficacy, while greater social support and more positive breastfeeding attitudes are linked to higher self efficacy.⁴

In a 2021 prevalence study conducted by Shah et al., the ability of the LATCH score to predict exclusive breastfeeding and infant weight gain at six weeks postpartum was examined

in a group of 93 mothers. The initial assessment took place within 24 hours after birth, with a follow-up evaluation at the time of hospital discharge. Mothers with low LATCH scores received counseling before leaving the hospital. Exclusive breastfeeding status and infant weight gain were then assessed at 1.5 months. A score of six or higher at discharge was found to be the most accurate indicator of exclusive breastfeeding at six weeks postpartum. Additionally, a score above 6 at discharge was significantly associated with higher rates of exclusive breastfeeding and healthy weight gain at six weeks. Among mothers (n = 62) with an initial LATCH score below 6, a notable improvement in scores was observed by the time of discharge following counseling. The study highlighted the usefulness of the LATCH score in identifying mothers in need of support and guidance prior to discharge, helping to reduce the risk of early discontinuation of breastfeeding.⁶⁰

In 2018, Sowjanya et al. carried out a prospective cohort study to assess how well the LATCH scoring system predicts exclusive breastfeeding (EBF) at six weeks postpartum. Using a cutoff score of 5.5 at birth, the LATCH score demonstrated a receiver operating characteristic (ROC) area under the curve (AUC) of 0.915, with a sensitivity of 93.5% and a false positive rate of 34.2%. When reassessed at 48 hours or discharge with a threshold above 7.5, the AUC improved to 0.979. The researchers concluded that the LATCH score is a rapid, cost-effective, and reliable tool, especially useful in settings with limited resources, for identifying mothers likely to continue breastfeeding in the early postpartum period.⁶¹

MATERIALS & METHODS

MATERIALS & METHODS

SOURCE OF DATA: All the mothers of term neonates delivered at RL JALAPPA HOSPITAL by normal delivery & caeserian delivery

STUDY DESIGN: A Prospective Observational Study will be conducted with accompanying female nurse

STUDY PERIOD: 1 year from APRIL 2023 TO MARCH 2024 or till the sample size was met which ever is earlier.

INCLUSION CRITERIA: All the mothers of term neonates delivered at RL JALAPPA HOSPITAL by normal delivery & caeserian delivery who are consented to be a part of the study

EXCLUSION CRITERIA:

1. Neonate requiring NICU admission
2. Neonates of sick mothers
3. Preterm neonates
4. Neonates requiring IV fluids for first 48 hours of life

Sample size:

- Sample size was estimated by using correlation coefficient (r) of BSES-SF score with Latch score of the mothers as 0.29 (i.e. $r = 0.29$) from the study by Emine gercek et al. Using these values at 99% confidence level and 90% power and substituting in the below formula, sample size of 170 was obtained. Considering 10% Non-response rate a sample size of $170 + 7 = 177$ minimum subjects will be included in the study

$$\text{Total sample size} = N = [(Z_{\alpha} + Z_{\beta})/C]^2 + 3$$

The standard normal deviate for $\alpha = Z_{\alpha} = 2.57$

The standard normal deviate for $\beta = Z_{\beta} = 1.28$

$r = \text{Correlation coefficient} = 0.29$

$$C = 0.5 * \ln[(1+r)/(1-r)] = 0.2986$$

$$N = 180$$

Study design: A Prospective observational study **will be conducted with accompanying female nurse**

METHODS OF COLLECTING DATA:

The study will be started after obtaining consent from the participants. All neonates fulfilling the inclusion criteria will be included in the study.

Sampling technique:

The study was performed from day 1 of life with scoring performed on day 1 of life and repeated everyday till 5 days.

The Breast feeding Self Efficacy Scale-Short form(BSES-SF) and LATCH Breast feeding assessment tool were used as methodology

BSES-Short form was used to collect data related to breast feeding problems which include time of establishment of breast feeding, weight loss , number of births, type of birth, continuity of exclusive breast feeding at discharge and maternal factors like sore nipple. The BSES-SF is provided to the mother in(kanadda)their own understandable language. As the study having most of the mothers, who are native of karnataka.

Components of BSES-SF mother Includes

1)ನನ್ನ ಮಗುವಿಗೆ ಸಾಕಷ್ಟು ಹಾಲು ಸಿಗುತ್ತಿದೆ ಎಂದು ನಾನು
ಯಾವಾಗಲೂ ನಿರ್ಧರಿಸಬಹುದು

2)ಇತರ ಸವಾಲಿನ ಕೆಲಸಗಳೊಂದಿಗೆ ನಾನು ಹೊಂದಿರುವಂತೆ
ಸ್ತನ್ಯಪಾನವನ್ನು ನಾನು ಯಾವಾಗಲೂ ಯಶಸ್ವಿಯಾಗಿ ನಿಭಾಯಿಸಬಲ್ಲೆ

3)ನಾನು ಯಾವಾಗಲೂ ಹಾಲು ಸಾಕುಪಡಿಸುವುದು ಹೊಂದಿದ
ಸಹಾಯಕ ಆಹಾರವನ್ನು ಬಳಸದೆ ನನ್ನ ಮಗುವಿಗೆ ಹಾಲು ಕೊಡಲು
ಸಾಧ್ಯವಿದೆ.

4)ನಾನು ಯಾವಾಗಲೂ ನನ್ನ ಮಗುವು ಹೊರಗೆಡವಿಲ್ಲದೆ ಸಮಗ್ರ
ಹೇಯನ್ನು ನಿರ್ಧರಿಸುವುದನ್ನು ಖಚಿತಪಡಿಸಬಲ್ಲೆನು.

5)ನಾನು ಯಾವಾಗಲೂ ಸ್ತನ್ಯಪಾನ ಪರಿಸ್ಥಿತಿಯನ್ನು ನನ್ನ ತೃಪ್ತಿಗೆ
ತಕ್ಕಂತೆ ನಿರ್ವಹಿಸಬಲ್ಲೆ

6)ನನ್ನ ಮಗು ಅಳುತ್ತಿದ್ದರೂ ನಾನು ಯಾವಾಗಲೂ ಸ್ತನ್ಯಪಾನ
ಮಾಡಬಲ್ಲೆ

7)ನಾನು ಯಾವಾಗಲೂ ಸ್ತನ್ಯಪಾನ ಮಾಡಲು ಬಯಸುತ್ತಿರಬಹುದು

8)ನನ್ನ ಕುಟುಂಬದ ಸದಸ್ಯರೊಂದಿಗೆ ನಾನು ಯಾವಾಗಲೂ
ಆರಾಮವಾಗಿ ಹಾಲುಣಿಸಬಹುದು

9)ನನ್ನ ಸ್ತನ್ಯಪಾನ ಅನುಭವದಿಂದ ನಾನು ಯಾವಾಗಲೂ
ತೃಪ್ತನಾಗಬಹುದು

10) ಸ್ತನ್ಯಪಾನವು ಸಮಯ ತೆಗೆದುಕೊಳ್ಳುತ್ತದೆ ಎಂಬ ಅಂಶವನ್ನು ನಾನು ಯಾವಾಗಲೂ ನಿಭಾಯಿಸಬಲ್ಲೆ

11) ಇನ್ನೊಂದು ಸ್ತನಕ್ಕೆ ಬದಲಾಯಿಸುವ ಮೊದಲು ನಾನು ಯಾವಾಗಲೂ ನನ್ನ ಮಗುವಿಗೆ ಒಂದು ಎದೆಯ ಮೇಲೆ ಆಹಾರವನ್ನು ನೀಡುವುದನ್ನು ಮುಗಿಸಬಹುದು

12) ಪ್ರತಿ ಆಹಾರಕ್ಕಾಗಿ ನಾನು ಯಾವಾಗಲೂ ನನ್ನ ಮಗುವಿಗೆ ಹಾಲುಣಿಸುವುದನ್ನು ಮುಂದುವರಿಸಬಹುದು

13) ನನ್ನ ಮಗುವಿನ ಸ್ತನ್ಯಪಾನದ ಬೇಡಿಕೆಗಳನ್ನು ನಾನು ಯಾವಾಗಲೂ ನಿರ್ವಹಿಸಬಲ್ಲೆ

14) ನನ್ನ ಮಗುವಿಗೆ ಸ್ತನ್ಯಪಾನವು ಯಾವಾಗ ಮುಗಿದಿದೆ ಎಂದು ನಾನು ಯಾವಾಗಲೂ ಹೇಳಬಲ್ಲೆ

1 - ವಿಶ್ವಾಸವೇ ಇಲ್ಲ

2- ತುಂಬಾ ಆತ್ಮವಿಶ್ವಾಸವಿಲ್ಲ

3- ಕೆಲವೊಮ್ಮೆ ಆತ್ಮವಿಶ್ವಾಸ

4-ಆತ್ಮವಿಶ್ವಾಸ

5-ಬಹಳ ಆತ್ಮವಿಶ್ವಾಸ

Each item has a five response choices on a likert scale, from not at all confident(1point) to always confident(5points).All the items are presented positively and their scores are summed to produce a total score ranging from 14 to 70. High total scores indicate higher levels of breast- feeding self-efficacy.

LATCH breast feeding assessment tool: The LATCH charting system was in connection with the APGAR scoring system and consists of five subscales. The tool provides a systemic comprehensive method for obtaining information on mother's breast feeding capabilities, The letters of acronym LATCH denote the areas of charting, as follows,

- (L) for how well the baby attaches to the breast,
- (A) for the number of swallows ,
- (T) for the nipple type,
- (C) for the maternal comfort grade, and
- (H) for the amount of assistance mother requires when holding her baby to her breast.

Total score obtained from evaluating breast feeding is 10; a total score that is below 10 indicates that the mother requires support

Statistical analysis:

Data was entered into Microsoft excel data sheet and was analyzed using SPSS 22 version software. Categorical data was represented in the form of Frequencies and proportions. **Chi-square test or Fischer's exact test** (for 2x2 tables only) was used as test of significance for qualitative data. **Yates correction** was applied where ever chi-square rules were not fulfilled (for 2x2 tables only).

Continuous data was represented as mean and standard deviation. **Independent t test or Mann Whitney U test** was used as test of significance to identify the mean difference between two quantitative variables and qualitative variables respectively.

Graphical representation of data: MS Excel and MS word was used to obtain various types of graphs such as bar diagram, Pie diagram and Scatter plots.

Pearson correlation or Spearman's correlation was done to find the correlation between two quantitative variables and qualitative variables respectively.

P value (Probability that the result is true) of <0.05 was considered as statistically significant after assuming all the rules of statistical tests.

Statistical software: MS Excel, SPSS version 22 (IBM SPSS Statistics, Somers NY, USA) was used to analyze data.

RESULTS

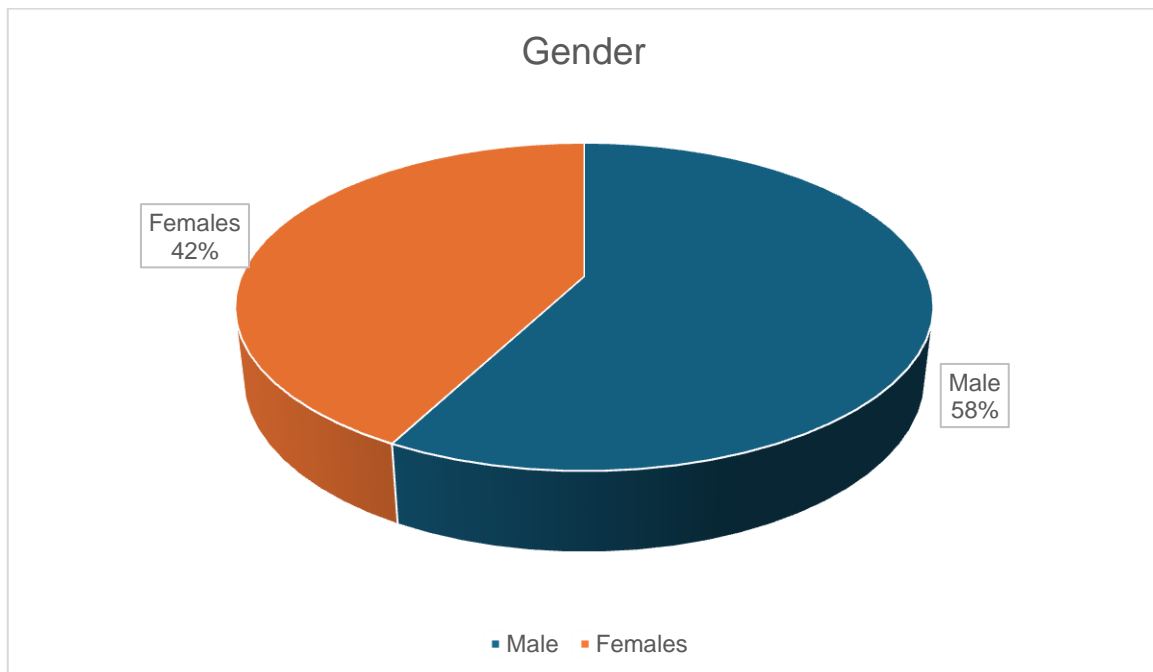
RESULTS

Table 2 :Sex-wise distribution of the neonates included in the study

Gender	Frequency	Percentage
Male	108	57.8
Females	79	42.2
Total	187	100.0

In this study majority of the neonates of the study participants were males (57.8%) compared to females (45.2).

FIGURE 4: Pie diagram showing gender distribution



Mother was the informant in all the cases in this study

Table-3: Age distribution of mother

Age groups (in years)	Frequency	Percentage
20 – 25	56	29.9
26 – 30	74	39.6
31 – 35	57	30.5
Total	187	100.0

In this study, the largest proportion of mothers were aged 26 to 30 years (39.6%), followed by those aged 31 to 35 years (30.5%) and 20 to 25 years (29.9%).

FIGURE 5: Bar diagram showing the age distribution of mother

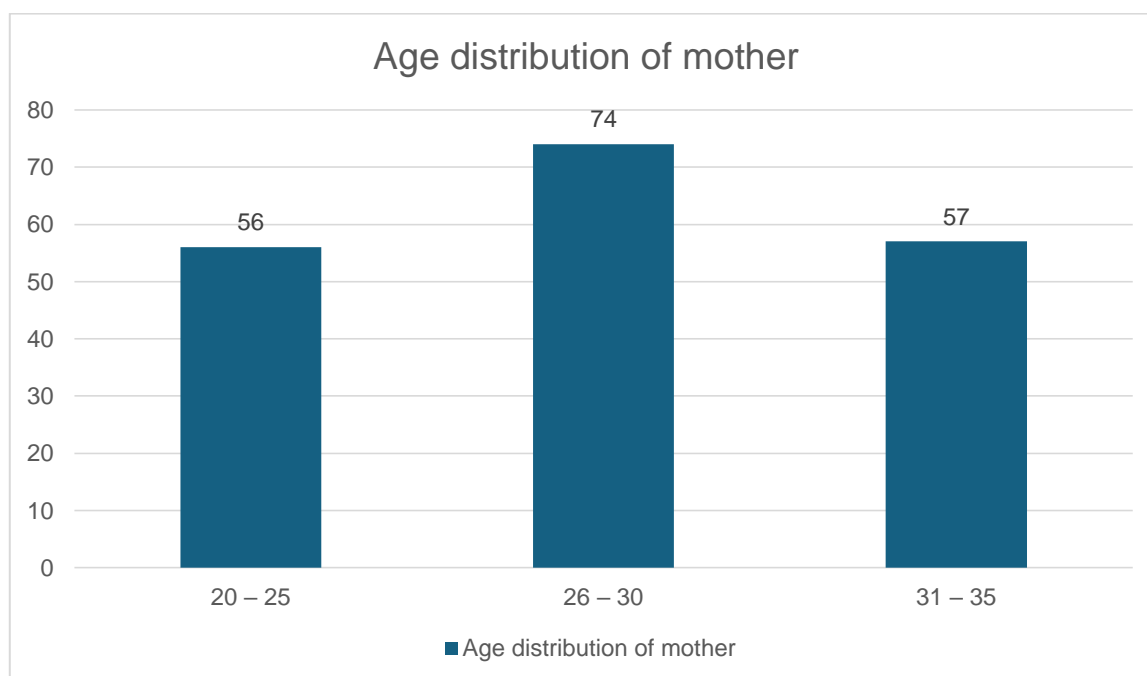


Table 4: Education level of mother

Education level	Frequency	Percentage
Primary education	65	34.8
Secondary education	115	61.5
Bachelor's degree	7	3.7
Total	187	100.0

Most of the mothers had a secondary level of education (61.5%) in this study, followed by primary level of education (34.8%). Only a few mothers had bachelor's degree (3.7%) in this study.

FIGURE 6: Bar diagram showing the education level of mother

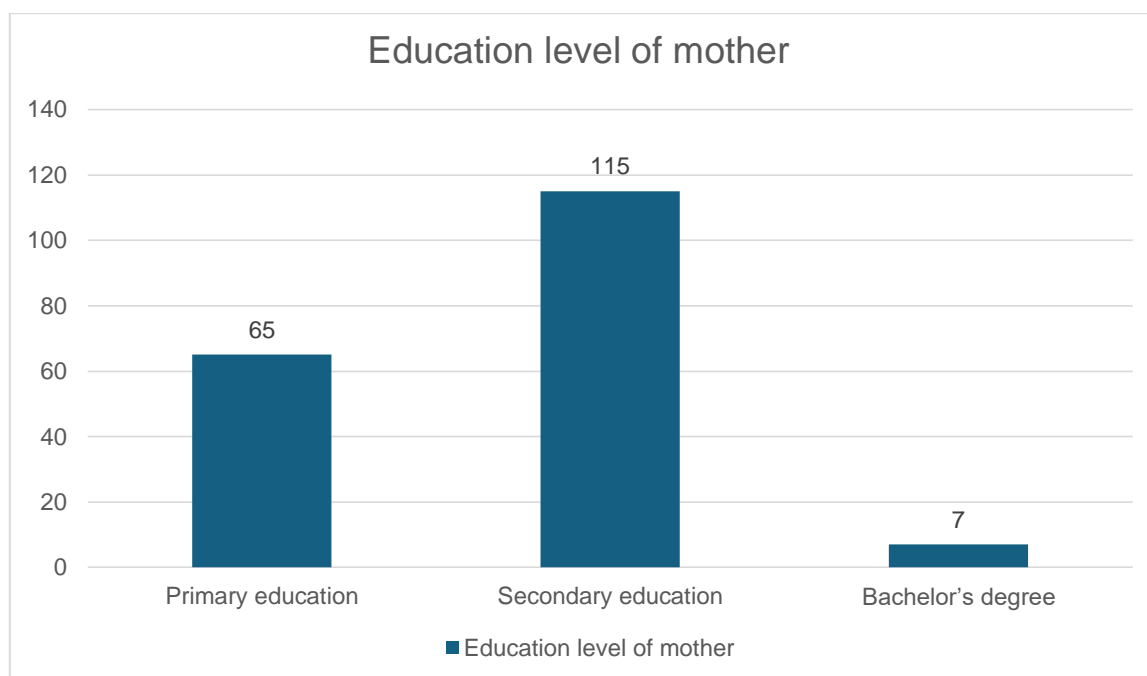


Table 5: Maternal factors

Maternal factors	Frequency	Percentage
Hypothyroid	13	7.0
Leaking PV	4	2.1
Pre-eclampsia	6	3.2
Nil	164	87.7
Total	187	100.0

In this study 7.0% of the mother had hypothyroidism, 3.2% had pre-eclampsia, and 2.1% had leaking PV.

FIGURE 7: Bar diagram showing maternal factors

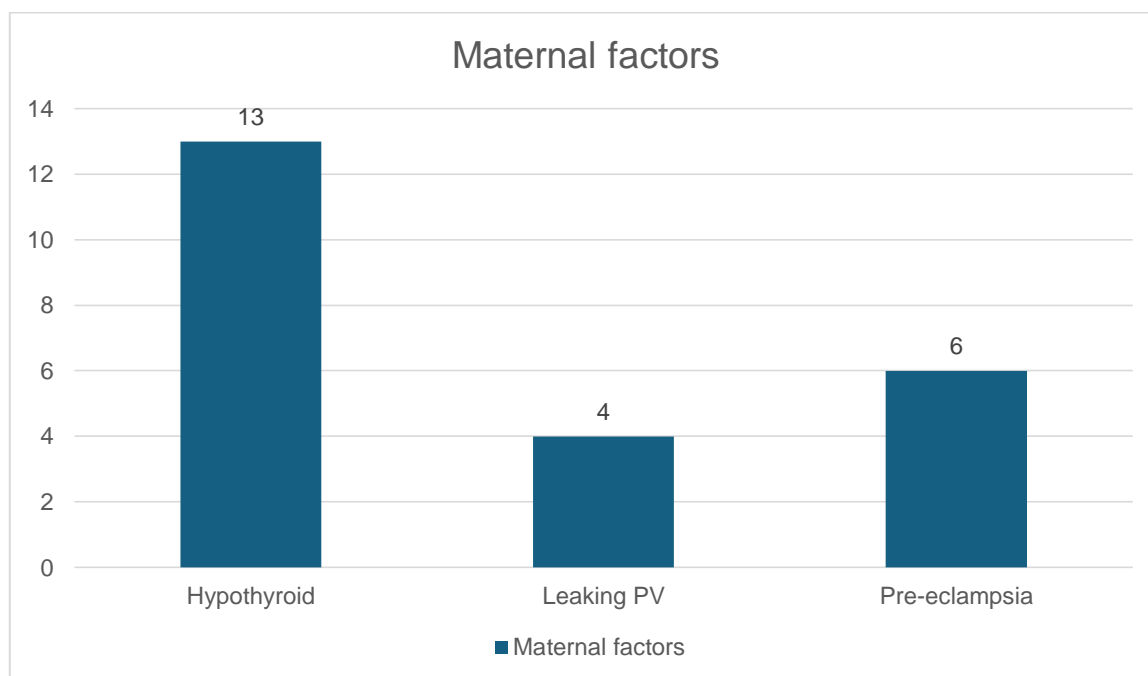


Table 6: Employment status

Employment status	Frequency	Percentage
Asha worker	3	1.6
Daily wage	7	3.7
Teacher	7	3.7
Home maker	170	90.9
Total	187	100.0

In this study majority of the mothers were homemakers (90.9%), followed by daily wage workers (3.7%), teachers (3.7%) and ASHA workers (1.6%).

FIGURE 8: Pie diagram showing employment status

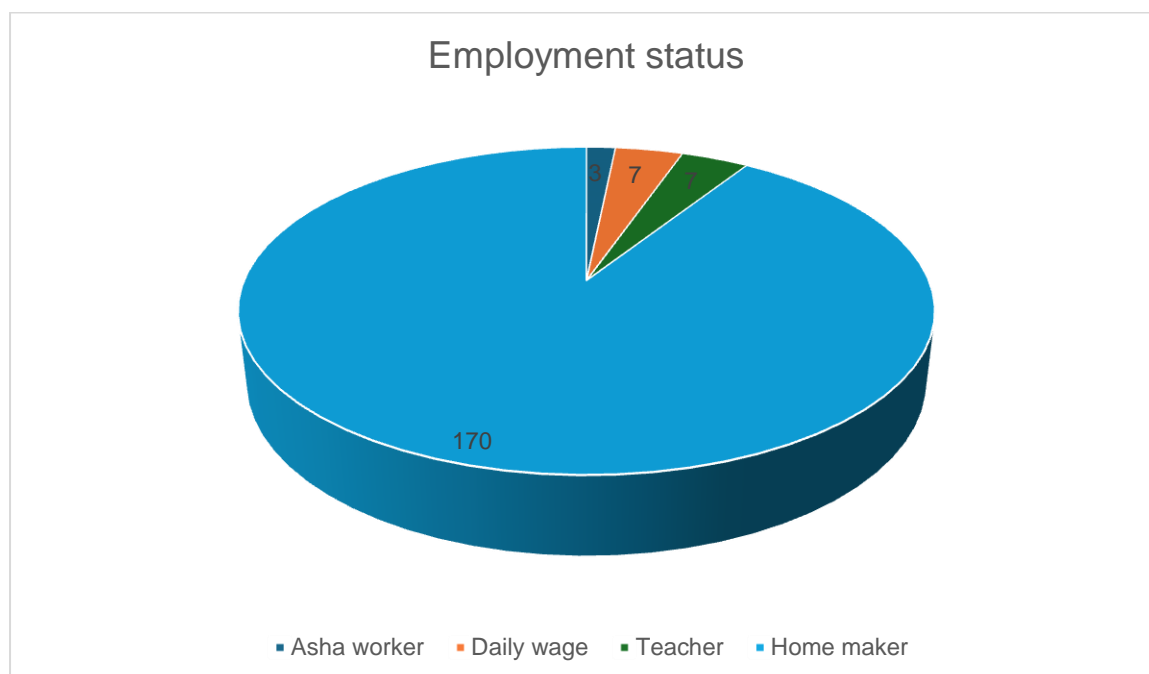


Table 7: Socioeconomic status

Socioeconomic status	Frequency	Percentage
Lower class	11	5.9
Lower middle class	134	71.7
Middle class	11	5.9
Upper middle class	31	16.6
Total	187	100.0

In this study majority of the study participants were in the lower middle class (71.7%), followed by the upper middle class (16.6%). Lower class and middle class were equally distributed in this study (5.9%).

FIGURE 9: Bar diagram showing socio-economic status

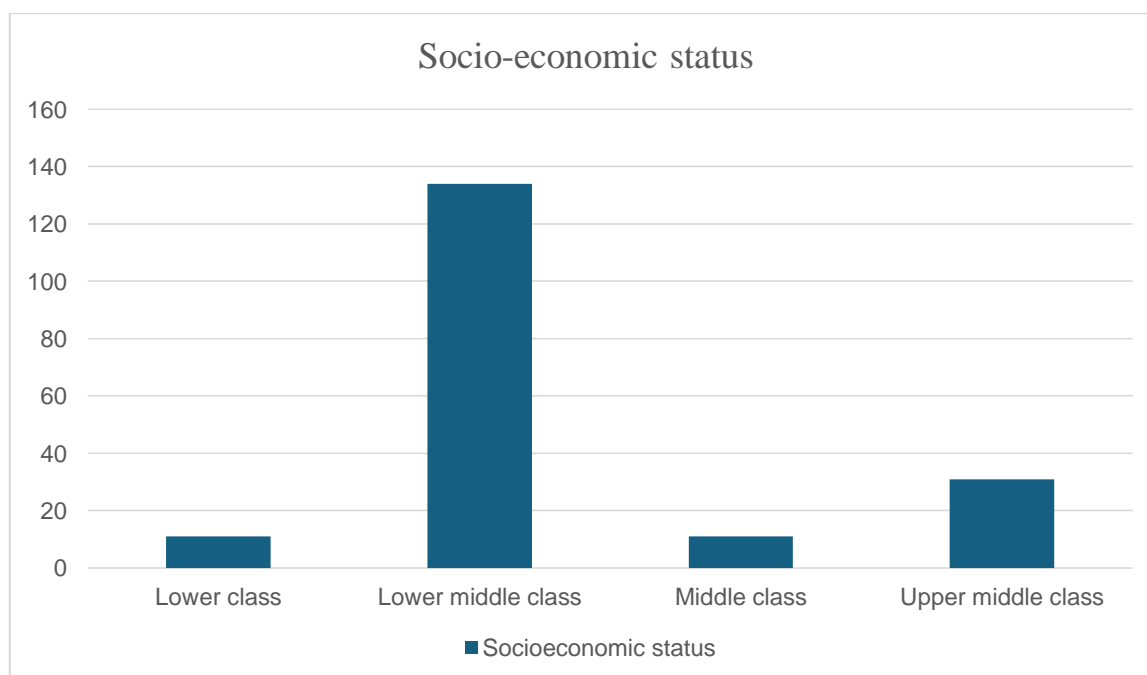


Table 8 : Marriage duration

Marriage duration	Frequency	Percentage
1 – 2 years	71	38.0
3 – 4 years	67	35.8
>4 years	49	26.2
Total	187	100.0

In this study majority of the mothers were married for 1 – 2 years (38.0%), followed by 3 – 4 years (35.8%), and the rest were for more than 4 years (26.2%).

FIGURE 10: Bar diagram showing marriage duration

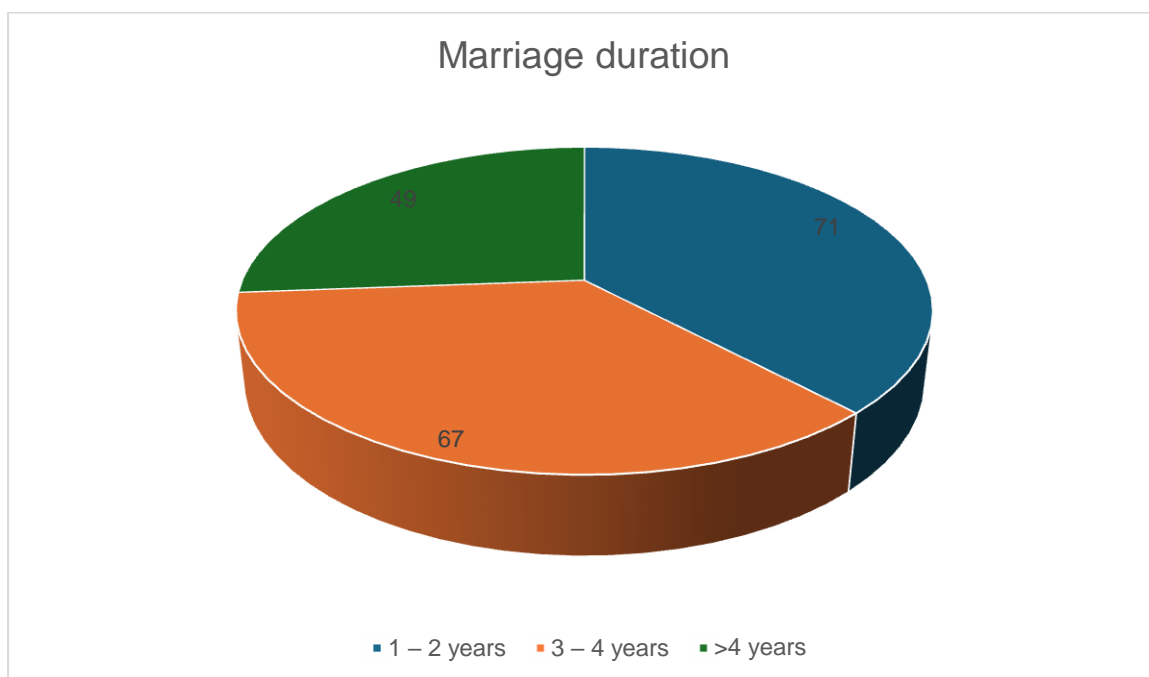


Table 10: Number of births

Number of births	Frequency	Percentage
1	91	48.7
2	77	41.2
3	16	8.6
4	3	1.6
Total	187	100.0

In this study majority of mothers had single child (48.7%), followed by two children (41.2%). In this study there were three children for 8.6% of the mothers and four children for 1.6% of the mothers.

FIGURE 11: Bar diagram showing number of births

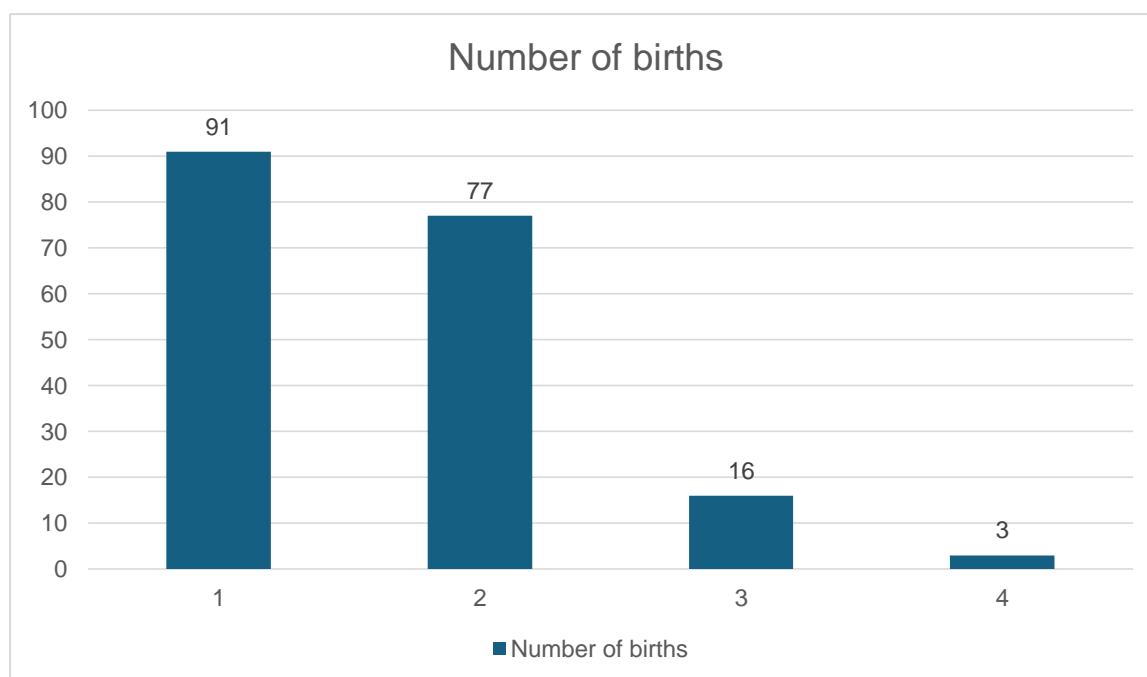


Table 11: Type of delivery

Type of delivery	Frequency	Percentage
LSCS	111	59.4
Vaginal delivery	75	40.1
Emergency LSCS	1	0.5
Total	187	100.0

The most common mode of delivery in this study was LSCS (59.4%), followed by vaginal delivery (40.1%) and emergency LSCS (0.5%).

FIGURE 12: Bar diagram showing the type of delivery

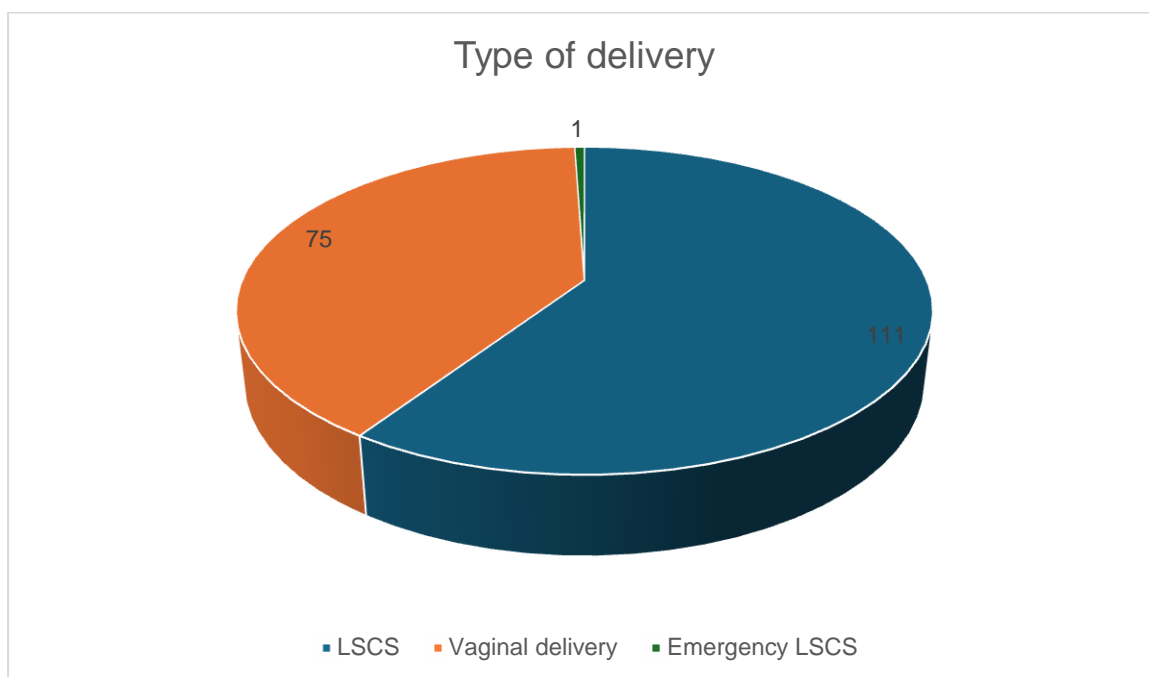


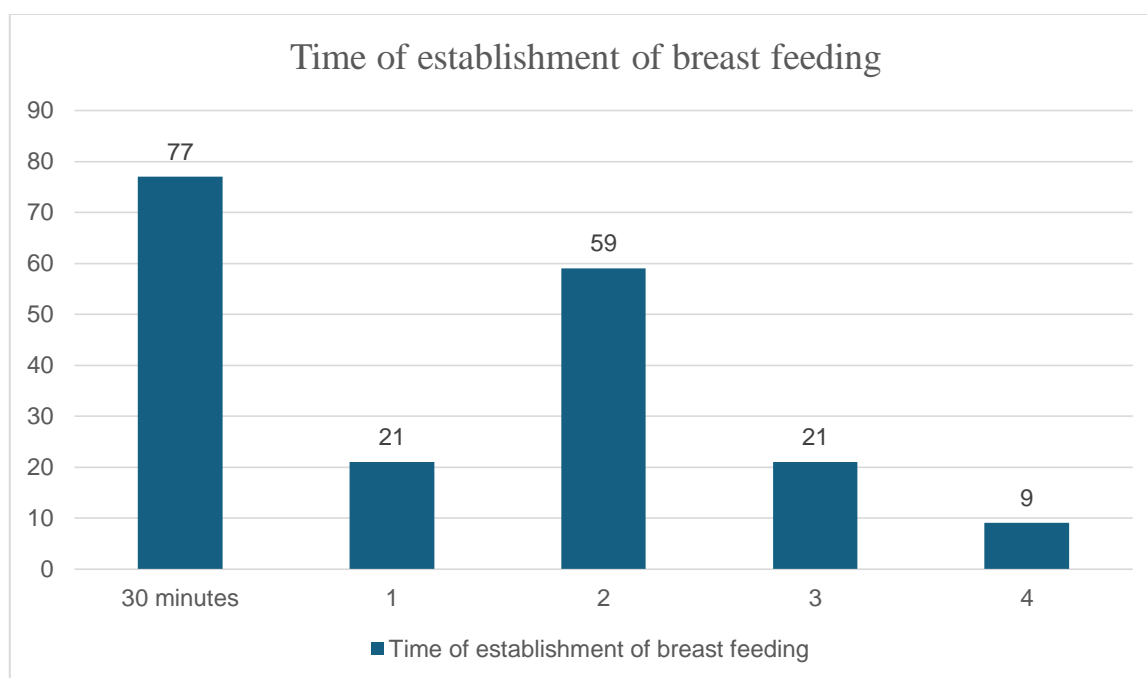
Table 12: Timing of initiation of breastfeeding post-delivery

Timing of initiation of breastfeeding post-delivery	Frequency	Percentage
30 minutes	77	41.2
1	21	11.2
2	59	31.6
3	21	11.2
4	9	4.8
Total	187	100.0

In this study majority of the mothers established breast feeding within 30 minutes (41.2%), followed by 2 hours (31.6%). The distribution of breastfeeding initiation within one hour and within three hours was approximately equal across the study population

Figure13: Bar diagram illustrating the initiation time of breastfeeding after birth.

40



Mean birthweight of the study population - 2.88 ± 0.39

Table 13: Mean weight loss percentage

Weight loss percentage	Mean	SD
Day 1	5.22	1.71
Day 2	6.49	1.63
Day 3	6.63	1.79
Day 4	6.35	1.78
Day 5	6.01	1.80

In this study the weight loss percentage was more in Day 3 ($6.63 \pm 1.76\%$), followed by Day 2 ($6.49 \pm 1.63\%$), and Day 4 ($6.35 \pm 1.78\%$). The weight loss percentage was $5.22 \pm 1.71\%$ in day 1 and $6.01 \pm 1.80\%$ in day 5 of the study.

Figure 14: Bar diagram showing Mean weight loss percentage

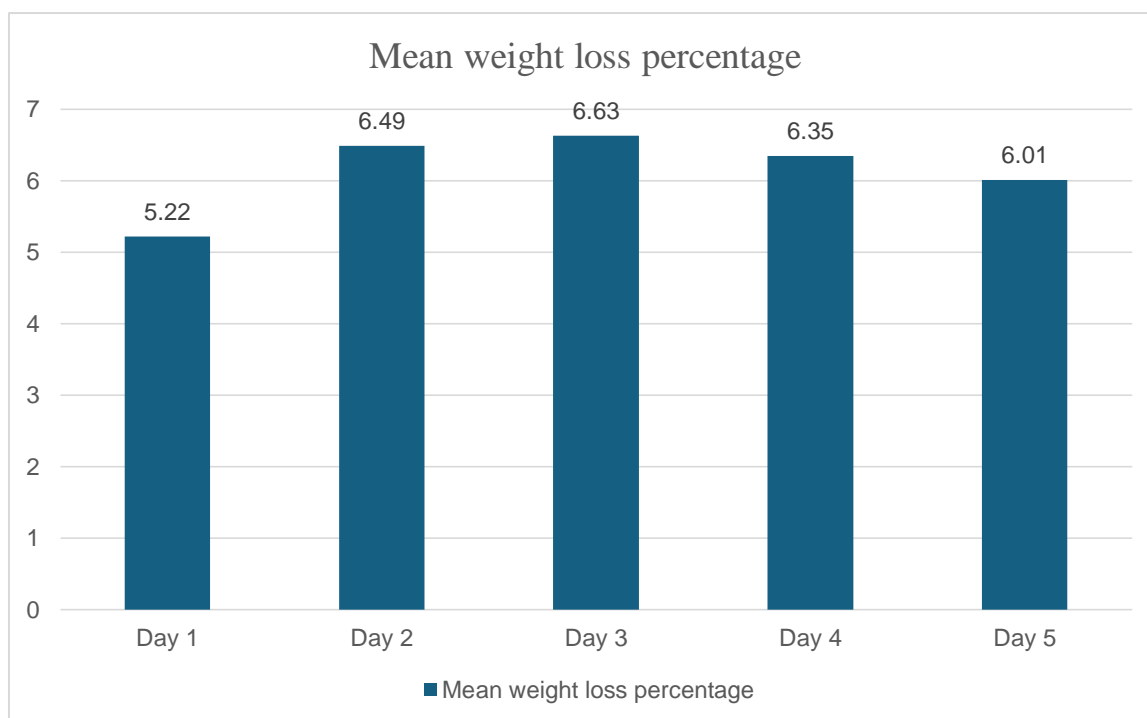


Table 14: Status of exclusive breastfeeding at the time of hospital discharge.

	Frequency	Percentage
Yes	169	90.4
Lactogen + DBF	18	9.6
Total	187	100.0

In this study majority of the mothers had exclusive breast feeding (90.4%), while others used formula feed along with direct breast milk (9.6%).

FIGURE 15: Bar diagram representing exclusive breastfeeding status upon discharge.

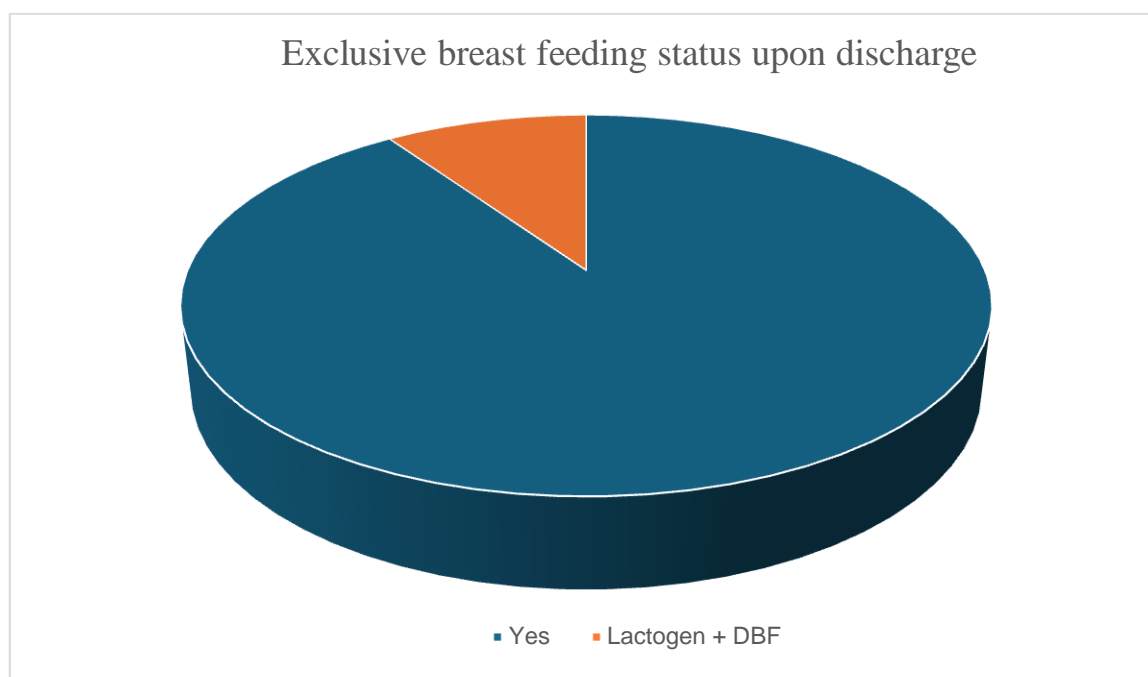


Table 15: Breast feeding self-efficacy scale short form mean scores

Breast feeding self-efficacy scale short form mean scores	Mean	SD
<6 hours	31.78	5.87
Day2	37.35	5.59
Day3	50.66	5.15
Day4	49.40	3.96
Day5	67.19	2.57

The mean scores of the BSES – short form was found to be lower at 6 hours (31.78 ± 5.87) and was found to be highest at day 5 (67.19 ± 2.57). The mean scores at day 2 to day 4 were, 37.35 ± 5.59 , 50.66 ± 5.15 and 49.40 ± 3.96 respectively.

Figure 16: Bar diagram showing Breast feeding self efficacy scale

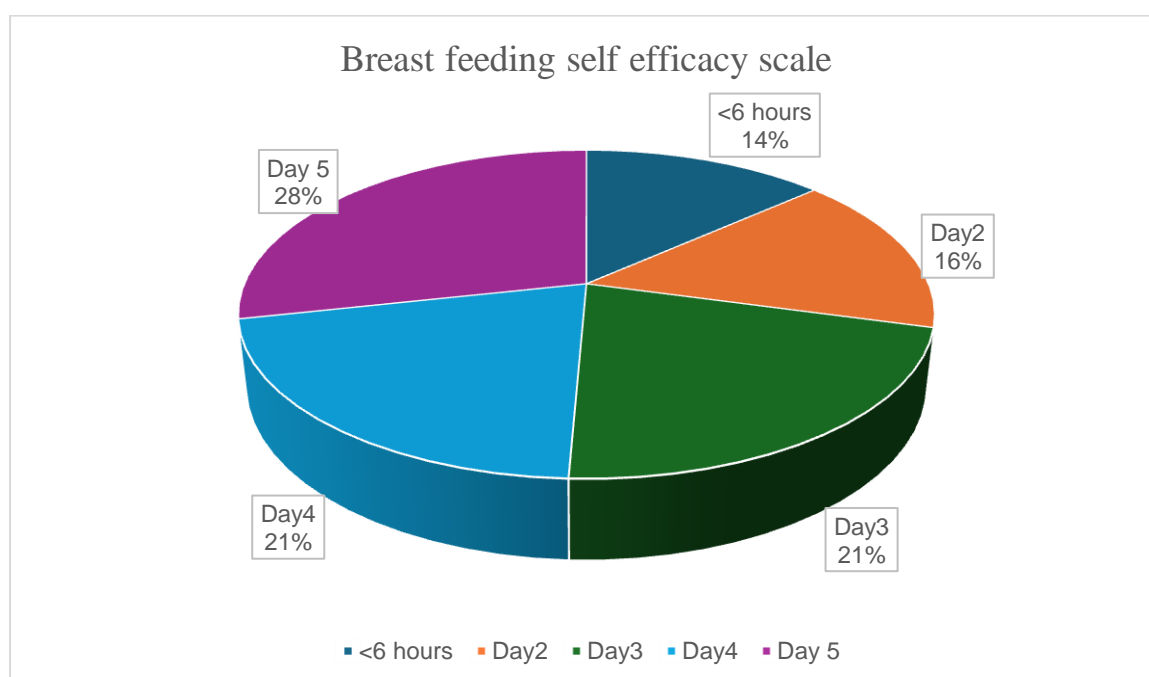


Table 16: Mean LATCH scores

Mean LATCH scores	Mean	SD
<6 hours	4.52	1.19
Day 2	6.03	1.39
Day 3	8.06	1.33
Day 4	8.44	1.13
Day 5	9.59	0.51

The mean LATCH scores were found to be lower at 6 hours (4.52 ± 1.19) and was found to be highest at day 5 (9.59 ± 0.51). The mean scores at day 2 to day 4 were, 6.03 ± 1.39 , 8.06 ± 1.33 and 8.44 ± 0.51 respectively.

Figure 17: Bar diagram showing Mean LATCH scores

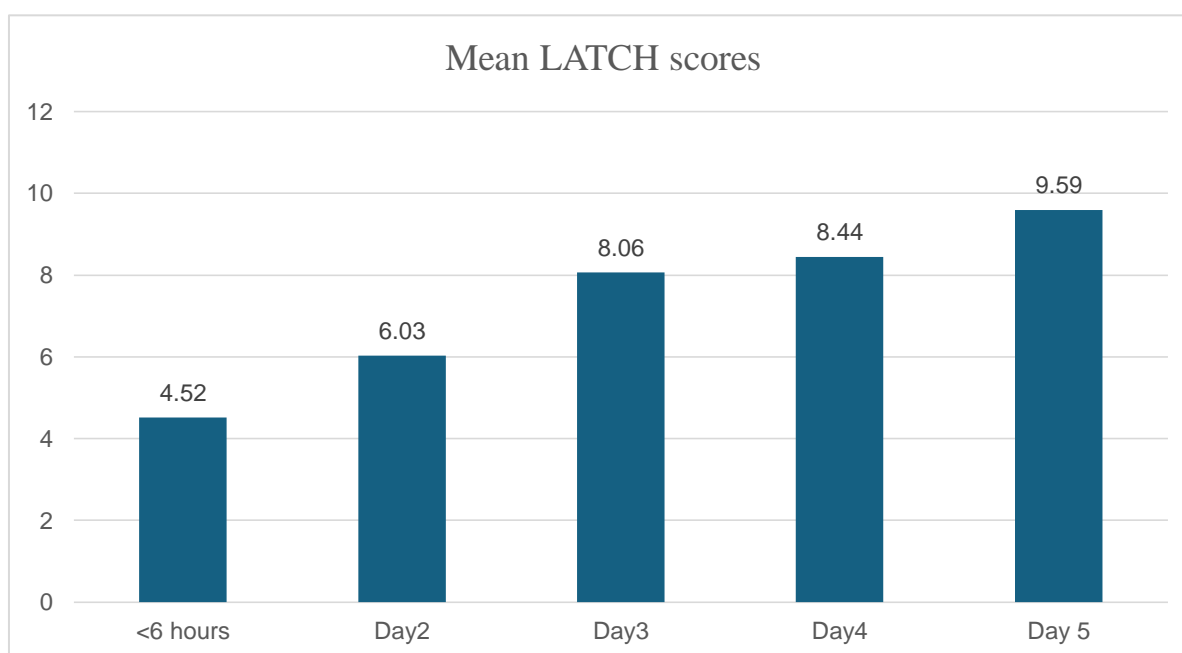


Table 17: Correlation between Breast feeding self-efficacy scale short form and latch scores

	Mean BSES – SF scores	Mean Latch scores	Pearson correlation coefficient	P value
<6 hours	31.78 ± 5.87	4.52 ± 1.19	0.034	0.641
Day 2	37.35 ± 5.59	6.03 ± 1.39	0.101	0.169
Day 3	50.66 ± 5.15	8.06 ± 1.33	0.094	0.198
Day 4	49.40 ± 3.96	8.44 ± 1.13	0.009	0.898
Day 5	67.19 ± 2.57	9.59 ± 0.51	0.046	0.530

There was no significant relationship found between the mean BSES-SF scores and the mean LATCH scores.

Figure 18: Bar diagram illustrating Breast feeding Self Efficacy Scale Short Form (BSES-SF) and LATCH score distribution

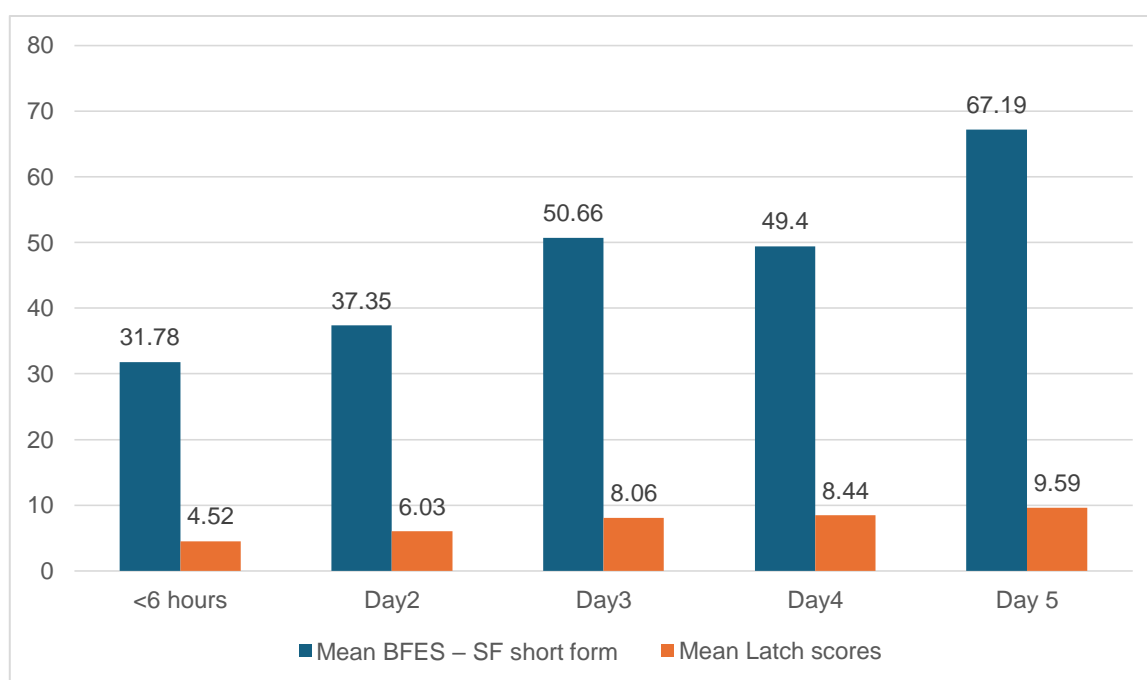


Table 18: Using the LATCH score to assess direct breastfeeding is convenient for healthcare professionals.

	Frequency	Percentage
Strongly agree	41	21.9
Agree	126	67.4
Neutral	20	10.7
Disagree	0	0
Strongly disagree	0	0
Total	187	100.0

In this study, 21.9% participants strongly agreed and 67.4% agreed that the LATCH scoring system is user-friendly for healthcare providers when evaluating direct breastfeeding, while 10.7% neither agreed nor disagreed.

Figure 19: Bar diagram illustrating the ease of using the LATCH score for direct breastfeeding assessment by healthcare providers.

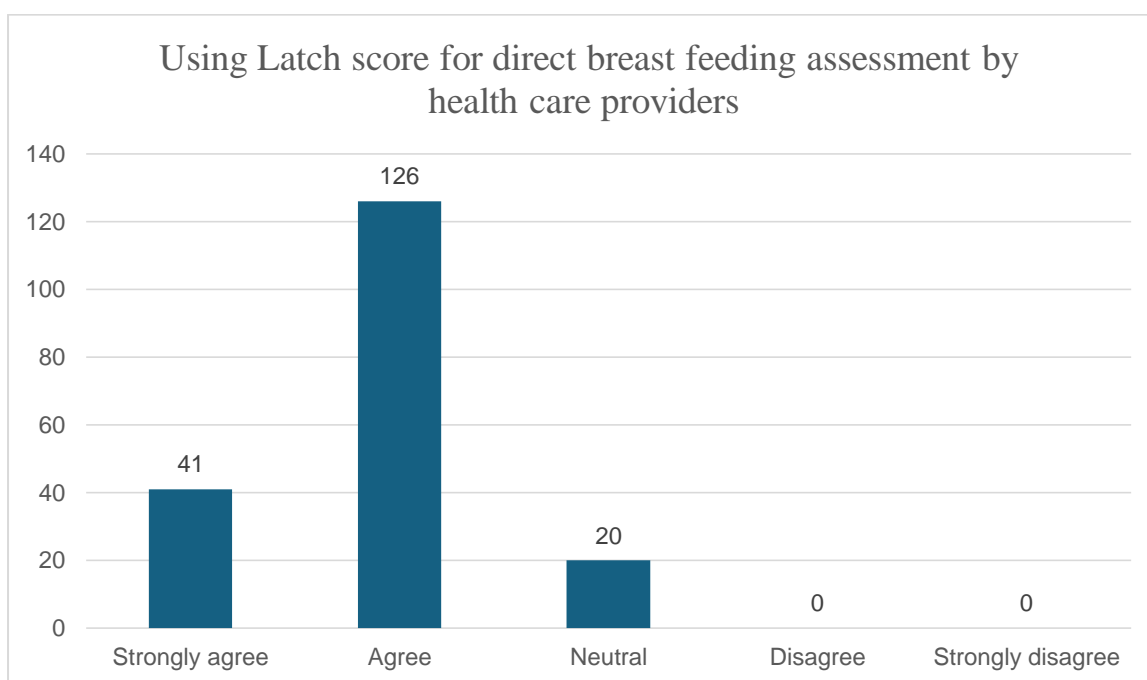


Table 19: Health care workers willing to use the latch score for DBF assessment in the future

	Frequency	Percentage
Strongly agree	56	29.9
Agree	123	65.8
Neutral	8	4.3
Disagree	0	0
Strongly disagree	0	0
Total	187	100.0

In this study, 29.9% of participants strongly agreed and 65.8% agreed that healthcare workers are willing to use the LATCH score for direct breastfeeding assessment in the future, with 4.3% remaining neutral on the matter.

Figure 20: Bar diagram showing Health care workers willing to use the latch score for DBF assessment in the future

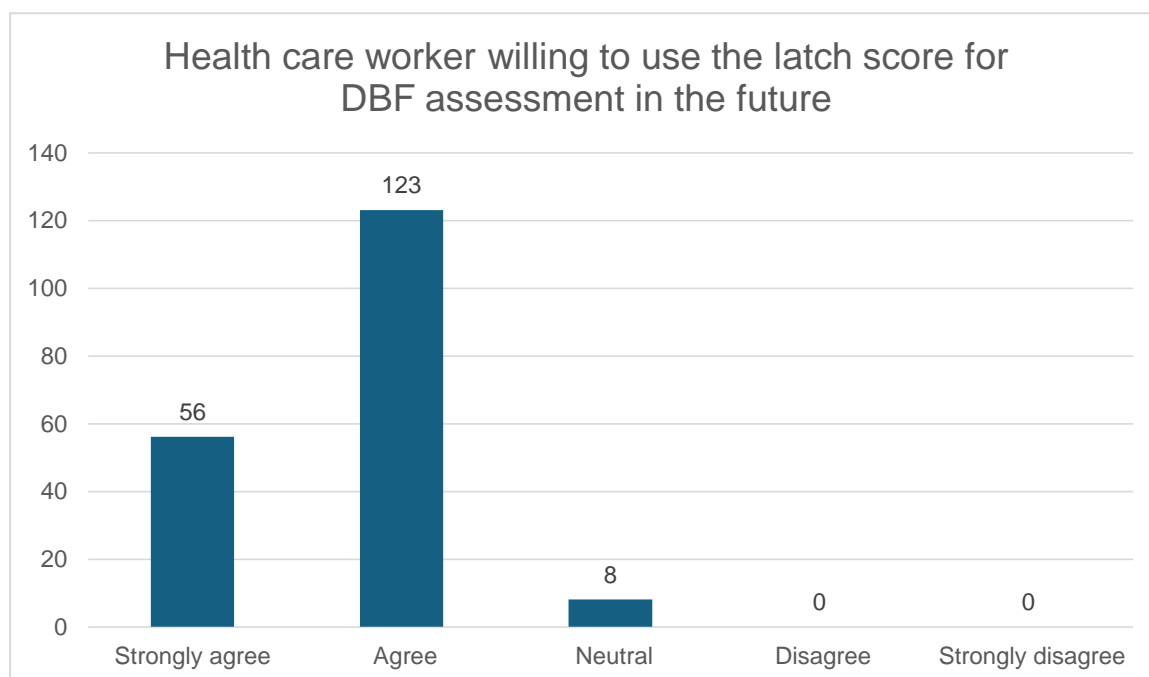


Table 20: Using BSES-SF score for DBF assessment is easy for the health care provider

	Frequency	Percentage
Strongly agree	51	27.3
Agree	115	61.5
Neutral	21	11.2
Disagree	0	0
Strongly disagree	0	0
Total	187	100.0

In this study, 27.3% participants strongly agreed and 61.5% agreed that the BSES-SF score is convenient for healthcare professionals to use in evaluating direct breastfeeding, with 11.2% remaining neutral on the issue.

Figure 21: Bar diagram showing Using BSES-SF score for DBF assessment is easy for the health care provider

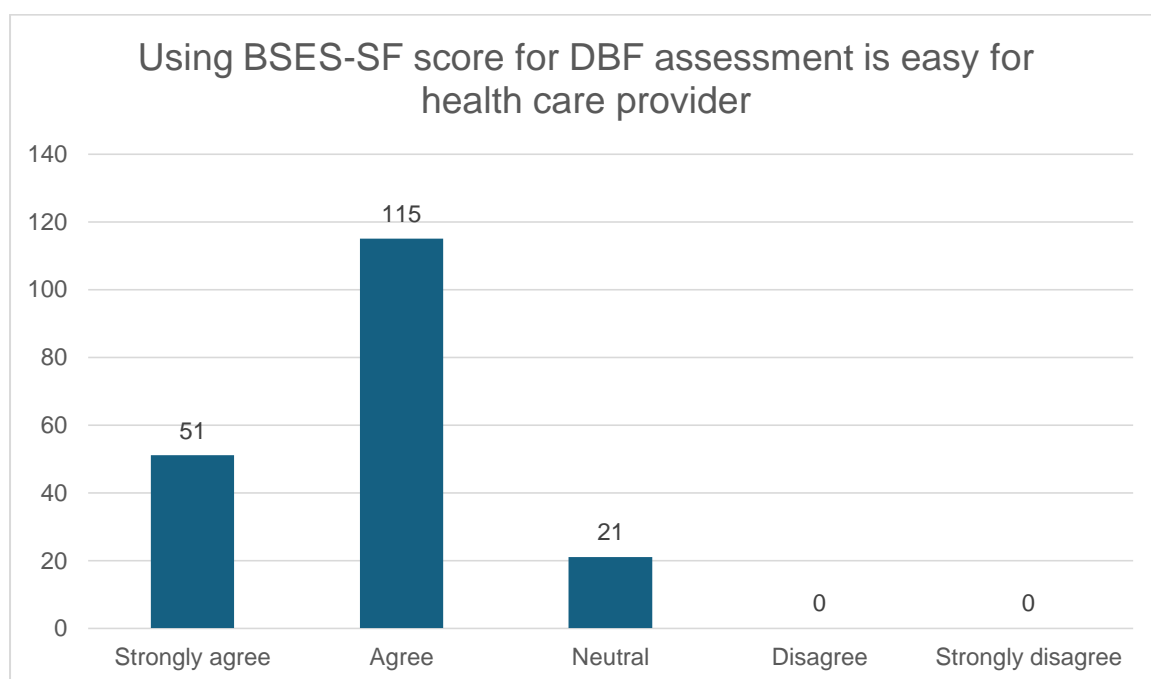


Table 21: Healthcare worker willing to use the BSES-SF score for DBF assessment in the future

	Frequency	Percentage
Strongly agree	59	31.6
Agree	118	63.1
Neutral	10	5.3
Disagree	0	0
Strongly disagree	0	0
Total	187	100

In this study, 31.6% participants strongly agreed and 63.1% agreed that healthcare workers are willing to use the BSES-SF score for direct breastfeeding assessment in the future, while 5.3% held a neutral stance on this issue.

Figure 22: Bar diagram showing Healthcare worker willing to use the BSES-SF score for DBF assessment in the future

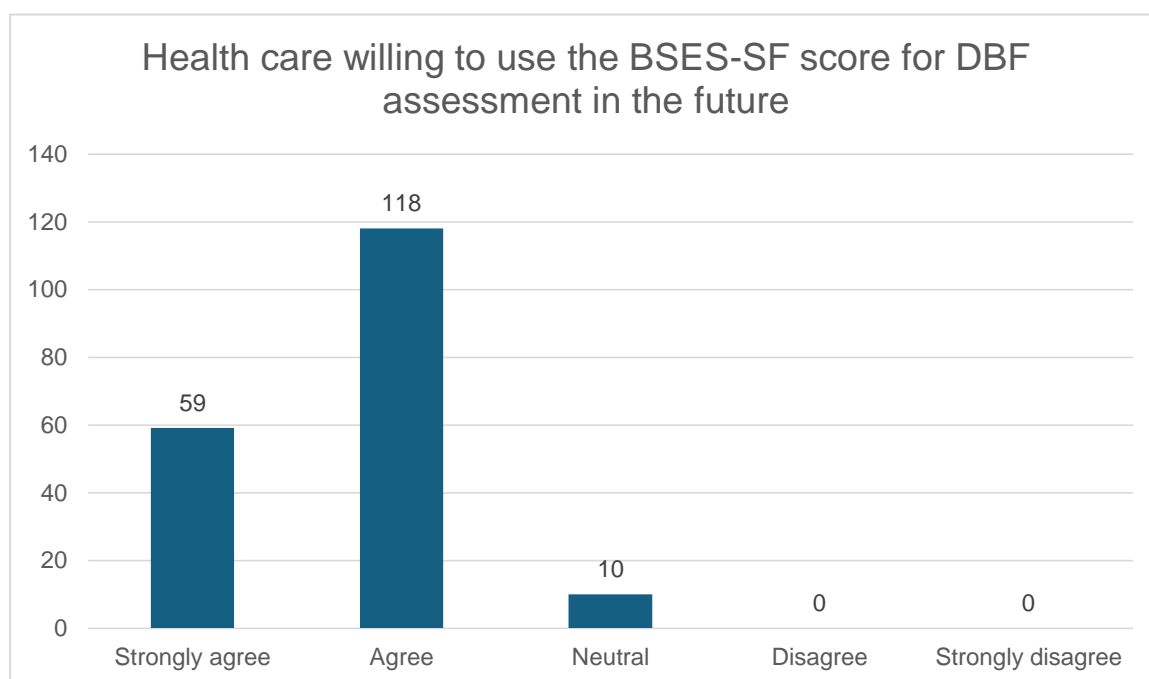


Table 22: Time taken for applying LATCH score

Time taken for applying LATCH score	Frequency	Percentage
<5 minutes	4	2.1
5 – 10 minutes	58	31.0
10 – 15 minutes	111	59.4
15 – 20 minutes	14	7.5
>20 minutes	0	0
Total	187	100.0

Considering time taken for applying Latch score it was found that, in majority of the subjects it took around 10 – 15 minutes (59.4%), followed by 5 – 10 minutes (31.0%) and 15 – 20 minutes (7.5%). Less than 5 minutes were taken by 2.1% of the study participants.

Figure 23: Bar diagram showing time taken for applying LATCH score

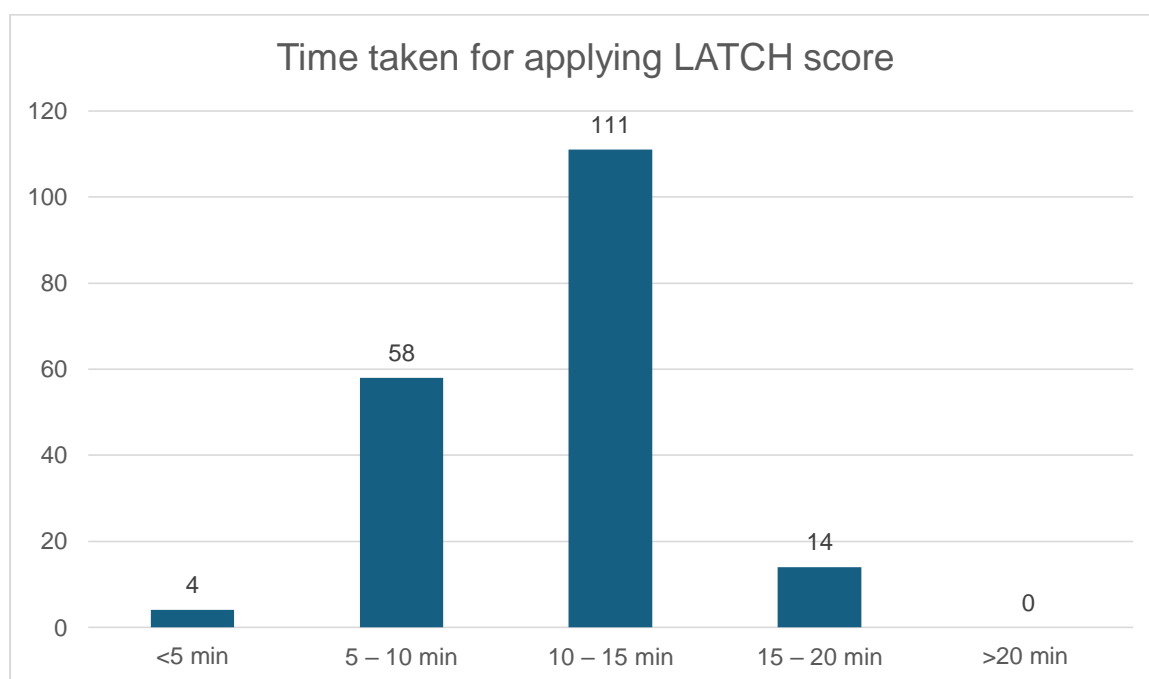


Table 23: Time taken for applying BSES-SF SCORE

Time taken for applying BSES-SF SCORE	Frequency	Percentage
<5 min	0	0
5 – 10 min	0	0
10 – 15 min	130	69.5
15 – 20 min	57	30.5
>20 min	0	0
Total	187	100.0

Considering time taken for applying BSES-SF score it was found that, in majority of the subjects it took around 10 – 15 minutes (69.5%), followed by 15 – 20 minutes (30.5%). None of the subjects took more than 20 minutes or less than 10 minutes in this study.

Figure 24: Bar diagram showing time taken for applying BSES-SF SCORE

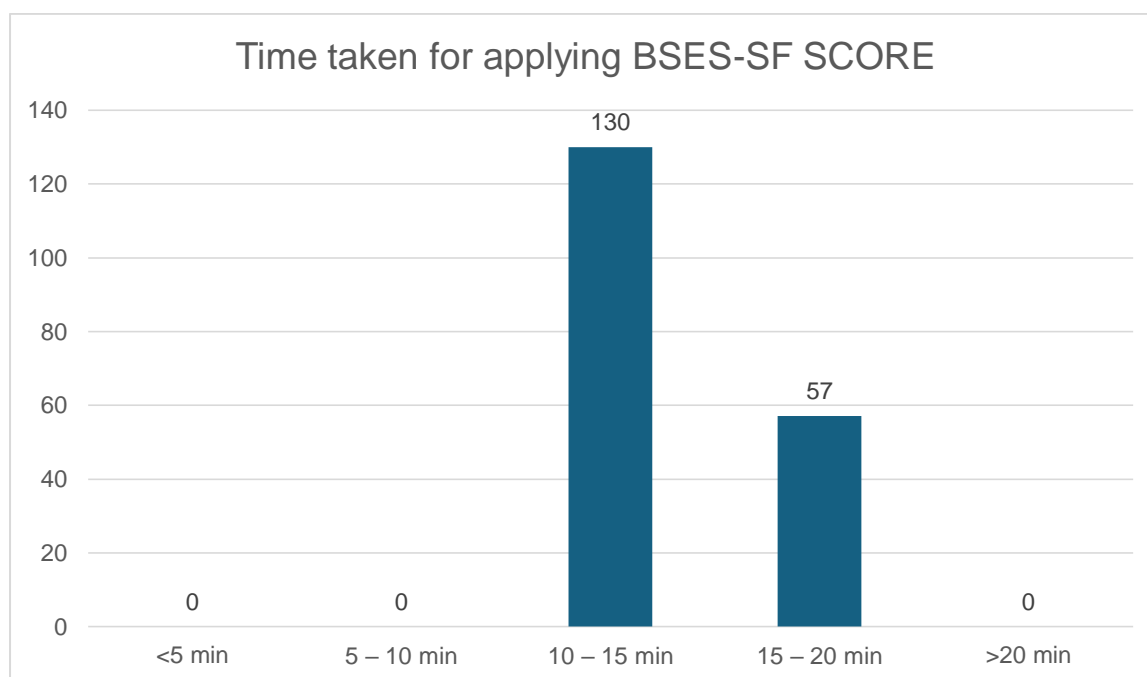


Table 24: I am confident in knowing when my baby is receiving sufficient milk.

	Mean score ± SD	Mean difference ± SD	P value
Day 1	2.24 ± 0.754		
Day 2	2.88 ± 0.546	0.674 ± 0.736	<0.001*
Day 3	3.29 ± 0.727	1.053 ± 0.966	<0.001*
Day 4	4.04 ± 0.547	1.807 ± 0.852	<0.001*
Day 5	4.59 ± 0.574	2.353 ± 0.812	<0.001*

A p-value less than 0.05 indicates statistical significance. There was a notable change in the scores between Day 1 and Day 5 when mothers were asked if they were consistently able to determine whether their baby was getting enough milk ($p < 0.001$).

Figure 25: Bar diagram showing I am confident in knowing when my baby is receiving sufficient milk

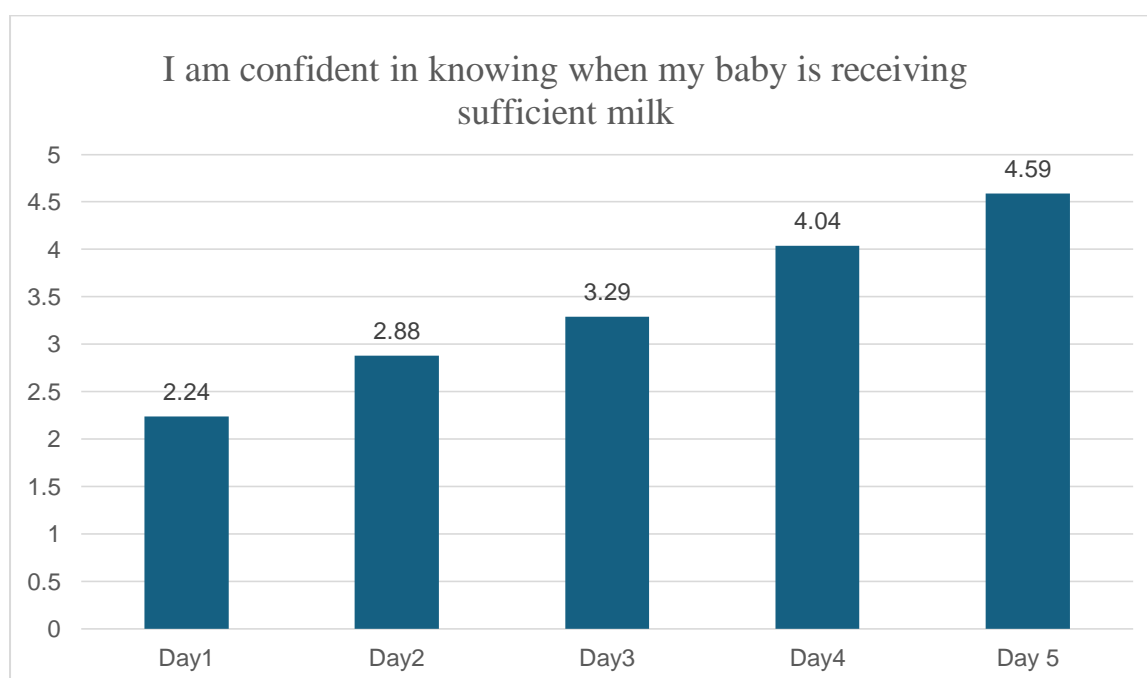


Table 25: I am able to effectively manage breastfeeding, including overcoming any related difficulties.

	Mean score ± SD	Mean difference ± SD	P value
Day 1	2.30 ± 0.723		
Day 2	3.01 ± 0.664	0.711 ± 0.749	<0.001*
Day 3	3.50 ± 0.772	1.198 ± 0.927	<0.001*
Day 4	4.16 ± 0.607	1.856 ± 0.889	<0.001*
Day 5	4.57 ± 0.576	2.273 ± 0.852	<0.001*

*p value < 0.05; statistically significant

There was a significant change in scores from Day 1 to Day 5 when mothers were asked whether they felt successful in breastfeeding, including managing breastfeeding-related challenges (p < 0.001).

Figure 26: Bar diagram illustrating confidence in successfully managing breastfeeding and overcoming related challenges.

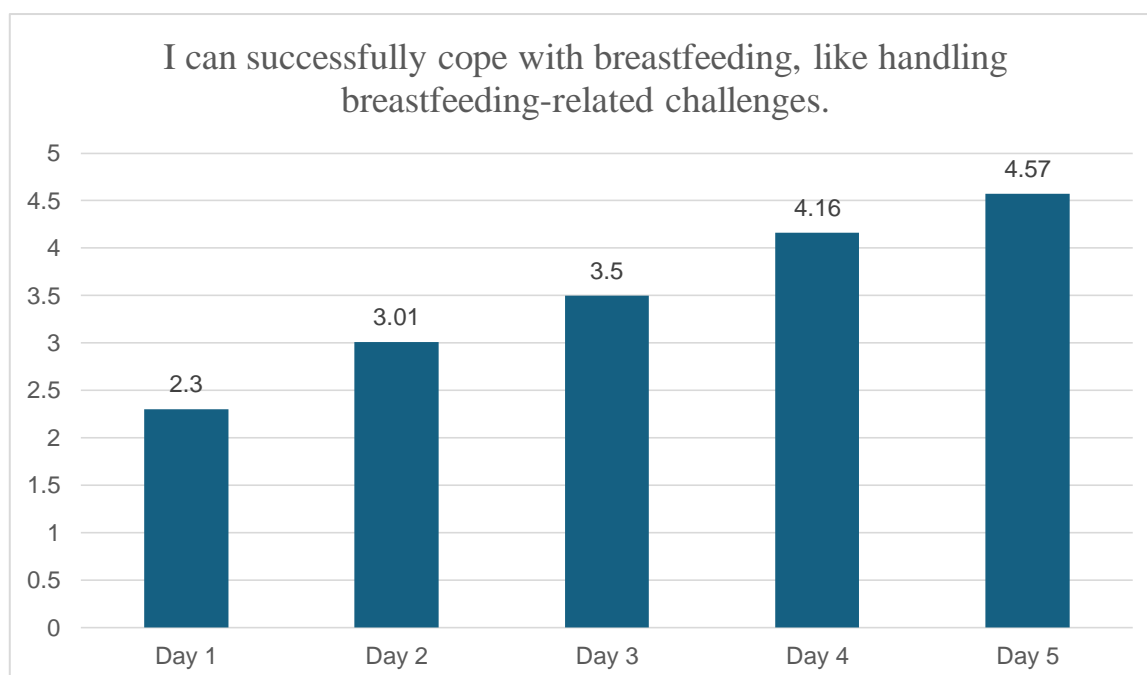


Table 26: I am able to breastfeed my baby exclusively without the need for formula milk.

P value < 0.05 indicates statistical significance. A significant change in scores was observed between Day 1 and Day 5 when mothers were asked if they were able to breastfeed their baby without supplementing with formula milk (p < 0.001).

	Mean score ± SD	Mean difference ± SD	P value
Day 1	2.23 ± 0.889		
Day 2	2.84 ± 0.698	0.615 ± 0.797	<0.001*
Day 3	3.36 ± 0.773	1.134 ± 0.961	<0.001*
Day 4	3.99 ± 0.766	1.765 ± 1.004	<0.001*
Day 5	4.39 ± 0.750	2.160 ± 1.110	<0.001*

Figure 27: Bar diagram depicting the ability to exclusively breastfeed without supplementing with formula milk.

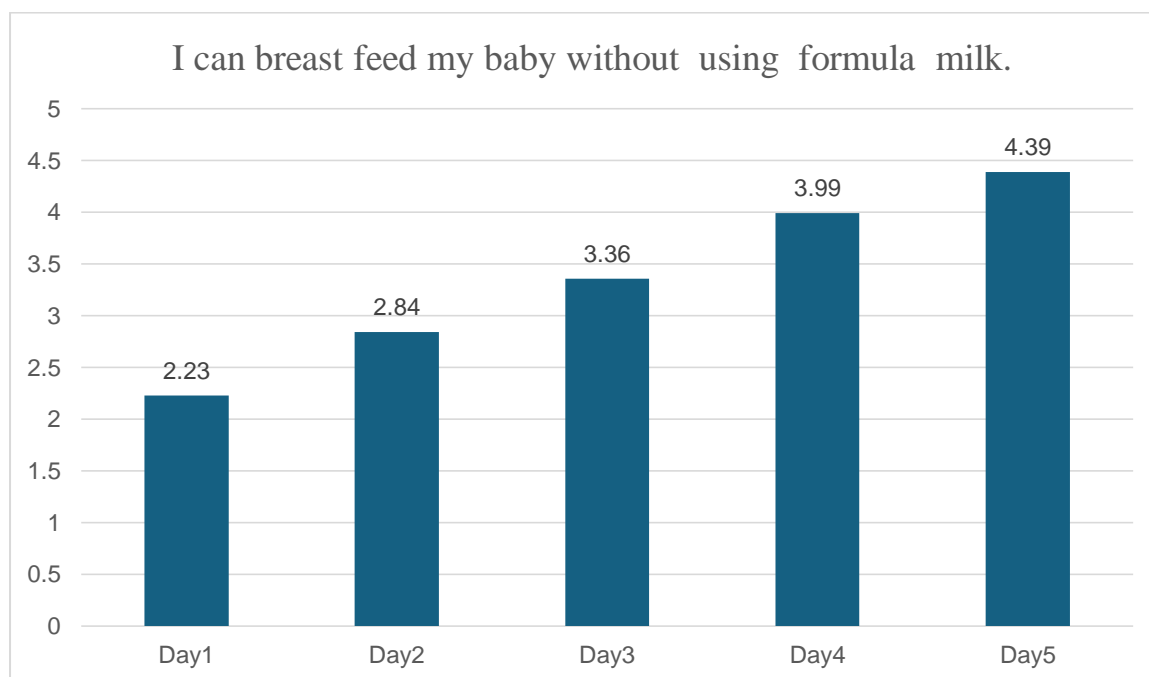


Table 27: I am consistently able to ensure that my baby latches onto the breast properly.

	Mean score \pm SD	Mean difference \pm SD	P value
Day 1	2.25 \pm 0.871		
Day 2	2.90 \pm 0.830	0.652 \pm 0.831	<0.001*
Day 3	3.43 \pm 0.732	1.176 \pm 0.937	<0.001*
Day 4	4.01 \pm 0.766	1.754 \pm 1.007	<0.001*
Day 5	4.41 \pm 0.692	2.155 \pm 1.012	<0.001*

*p value <0.05; statistically significant

A statistically significant shift in scores occurred between Day 1 and Day 5 when the mothers were asked the question if they can always ensure their baby latches onto their breast correctly (p <0.001).

Figure 28: Bar diagram illustrating mothers' confidence in consistently achieving proper latch during breastfeeding.

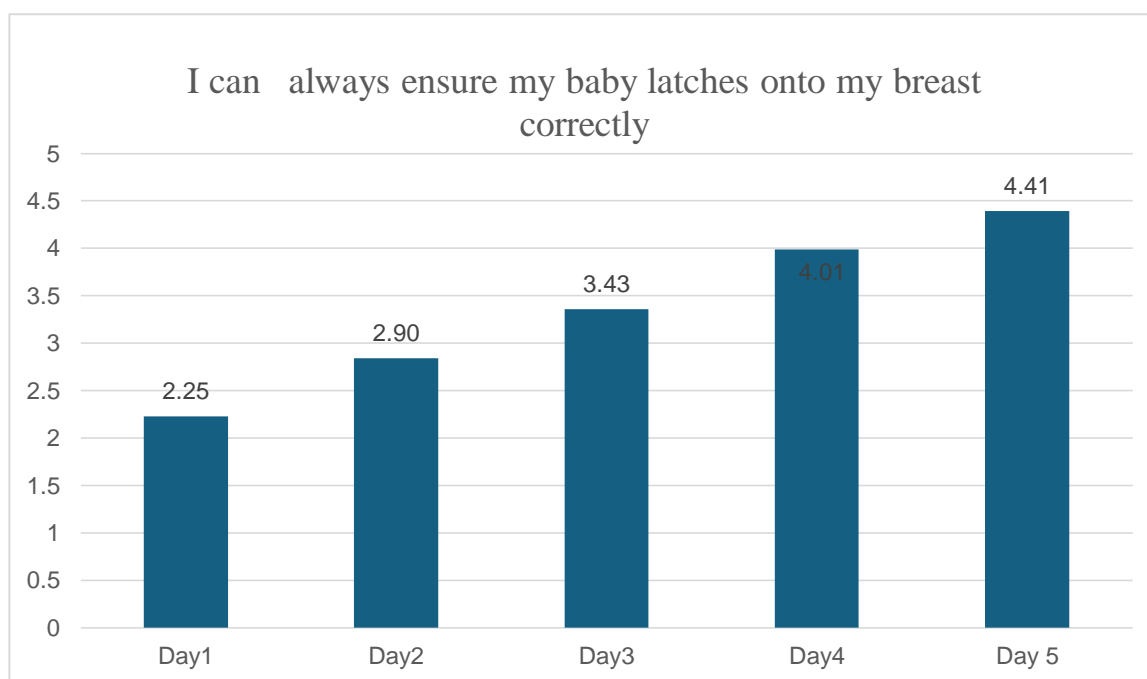


Table 28 :I am consistently confident and satisfied with how I perform during breastfeeding.

	Mean score \pm SD	Mean difference \pm SD	P value
Day 1	2.34 \pm 0.836		
Day 2	3.04 \pm 0.729	0.695	<0.001*
Day 3	3.65 \pm 0.721	1.305	<0.001*
Day 4	4.33 \pm 0.620	1.989	<0.001*
Day 5	4.71 \pm 0.491	2.364	<0.001*

*p value < 0.05; indicates a statistically meaningful difference

There was a statistically significant change in scores from Day 1 to Day 5 when mothers were asked whether they were consistently satisfied with their breastfeeding performance (p < 0.001).

Figure 29:Bar chart depicting mothers' consistent satisfaction with their breastfeeding performance

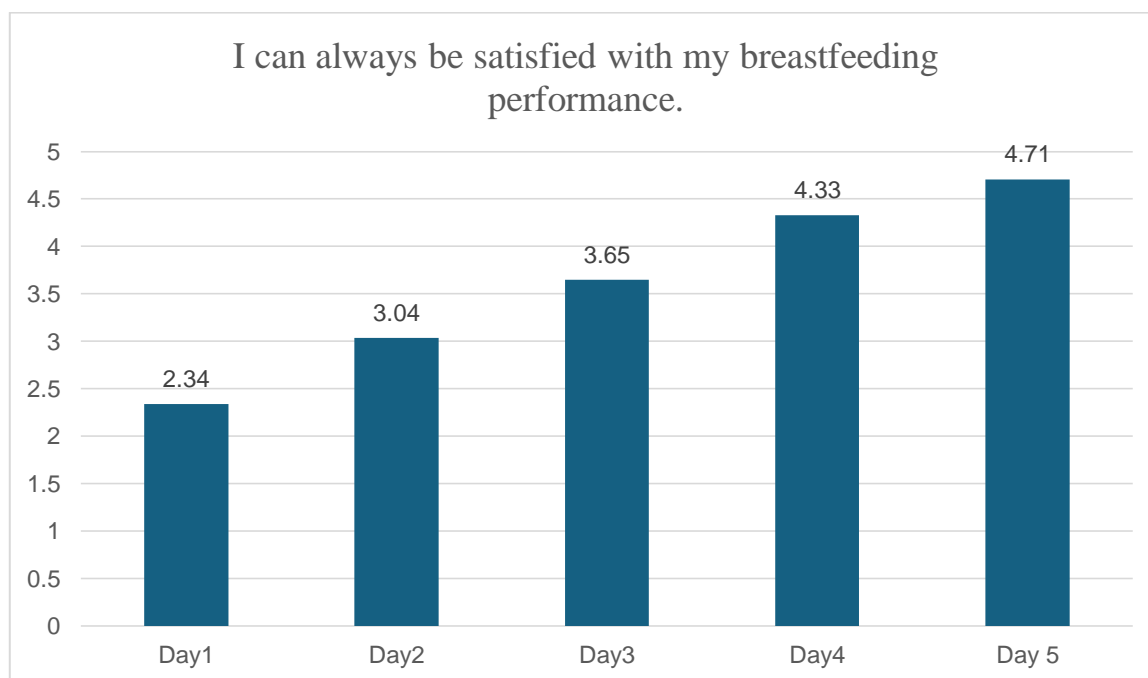


Table 29 : I am confident in my ability to continue breastfeeding even when my baby is crying.

	Mean score \pm SD	Mean difference \pm SD	P value
Day 1	2.19 \pm 0.858		
Day 2	2.90 \pm 0.791	0.711 \pm 0.824	<0.001*
Day 3	3.52 \pm 0.819	1.326 \pm 0.907	<0.001*
Day 4	4.26 \pm 0.754	2.064 \pm 1.040	<0.001*
Day 5	4.81 \pm 0.455	2.620 \pm 0.984	<0.001*

*p value < 0.05; indicates a statistically meaningful difference

A notable difference in scores was observed from Day 1 to Day 5 when mothers were questioned about their confidence in continuing to breastfeed despite their baby crying (p < 0.001).

Figure 30: Bar diagram illustrating mothers' confidence in continuing breastfeeding despite their baby crying.

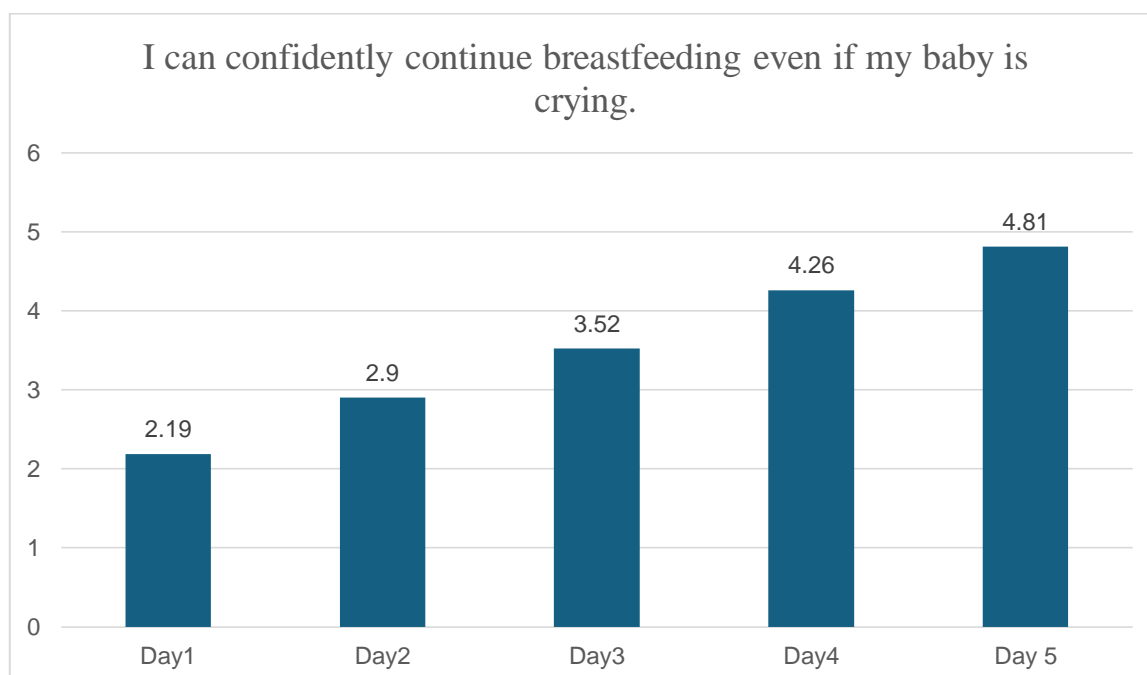


Table 30: I am consistently able to breastfeed my baby comfortably without experiencing any discomfort.

	Mean score \pm SD	Mean difference \pm SD	P value
Day 1	2.27 \pm 0.857		
Day 2	2.82 \pm 0.794	0.556 \pm 0.797	<0.001*
Day 3	3.55 \pm 0.824	1.278 \pm 0.903	<0.001*
Day 4	4.32 \pm 0.606	2.048 \pm 0.980	<0.001*
Day 5	4.89 \pm 0.358	2.626 \pm 0.944	<0.001*

P value < 0.05; indicating statistical significance

A significant change in scores was observed from Day 1 to Day 5 when mothers were asked whether they could consistently breastfeed their baby without experiencing discomfort (p < 0.001).

Figure 31: Bar diagram showing mothers' ability to breastfeed their baby comfortably without any discomfort.

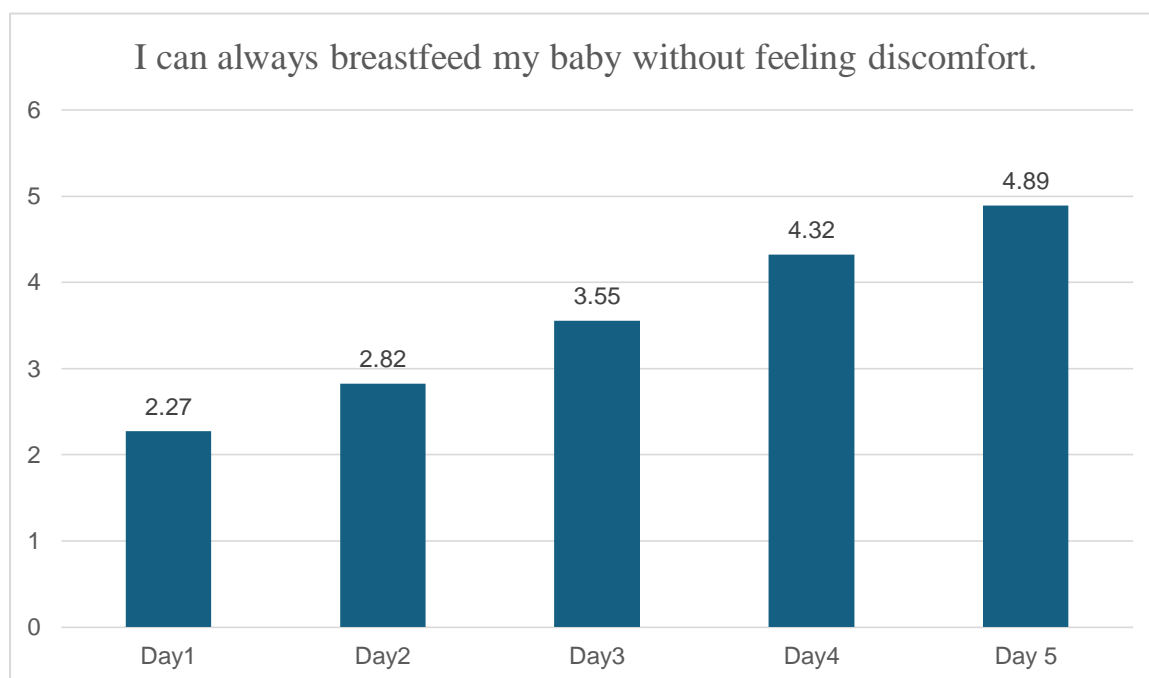


Table 31: I am consistently able to recognize when my baby is hungry.

	Mean score \pm SD	Mean difference \pm SD	P value
Day 1	2.35 \pm 0.856		
Day 2	2.99 \pm 0.718	0.642 \pm 0.846	<0.001*
Day 3	3.61 \pm 0.658	1.262 \pm 0.939	<0.001*
Day 4	4.24 \pm 0.603	1.888 \pm 1.002	<0.001*
Day 5	4.92 \pm 0.272	2.572 \pm 0.927	<0.001*

*p value < 0.05; statistically significant

There was a significant increase in scores from Day 1 to Day 5 when mothers were asked if they could consistently recognize when their baby is hungry ($p < 0.001$)

Figure 32: Bar diagram illustrating mothers' ability to consistently recognize their baby's hunger cues.

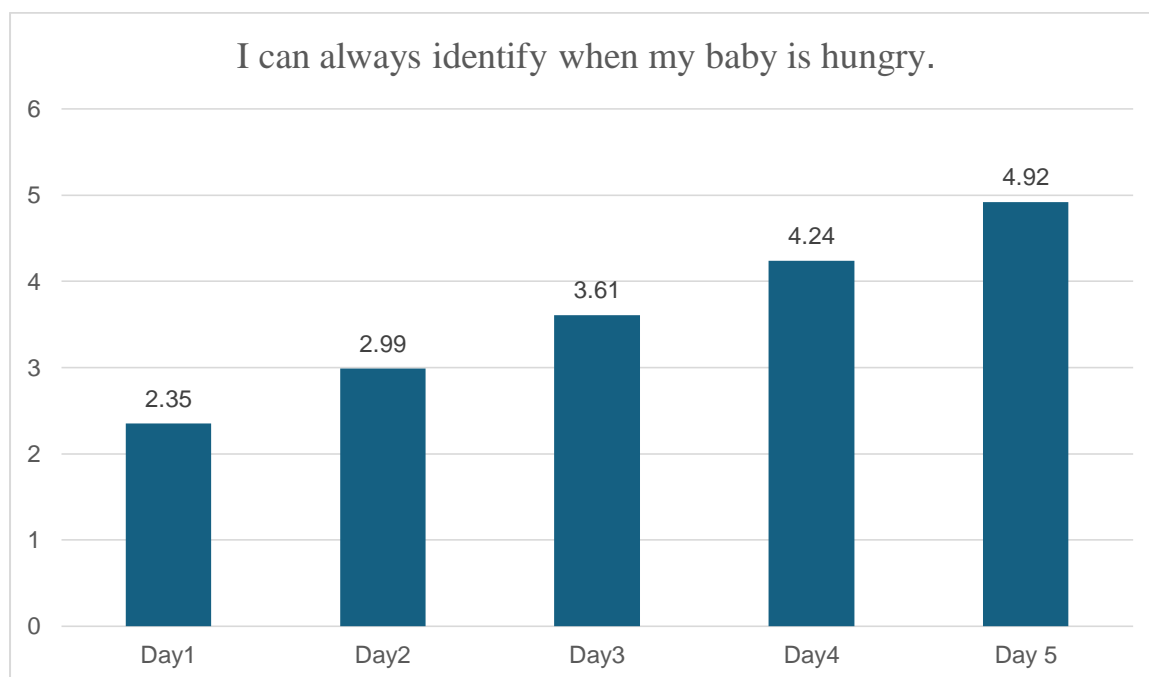


Table 32 :I am consistently able to produce sufficient milk to meet my baby's needs.

	Mean score ± SD	Mean difference ± SD	P value
Day 1	2.11 ± 0.904		
Day 2	2.82 ± 0.942	0.717 ± 0.880	<0.001*
Day 3	3.63 ± 0.732	1.519 ± 0.888	<0.001*
Day 4	4.20 ± 0.547	2.091 ± 1.004	<0.001*
Day 5	4.99 ± 0.103	2.882 ± 0.902	<0.001*

P value < 0.05, indicating statistical significance. A meaningful change in scores was detected between Day 1 and Day 5 when mothers were asked if they consistently believed they were producing enough milk for their baby (p < 0.001).

Figure 33: Bar diagram illustrating mothers' confidence in consistently producing sufficient milk for their baby.

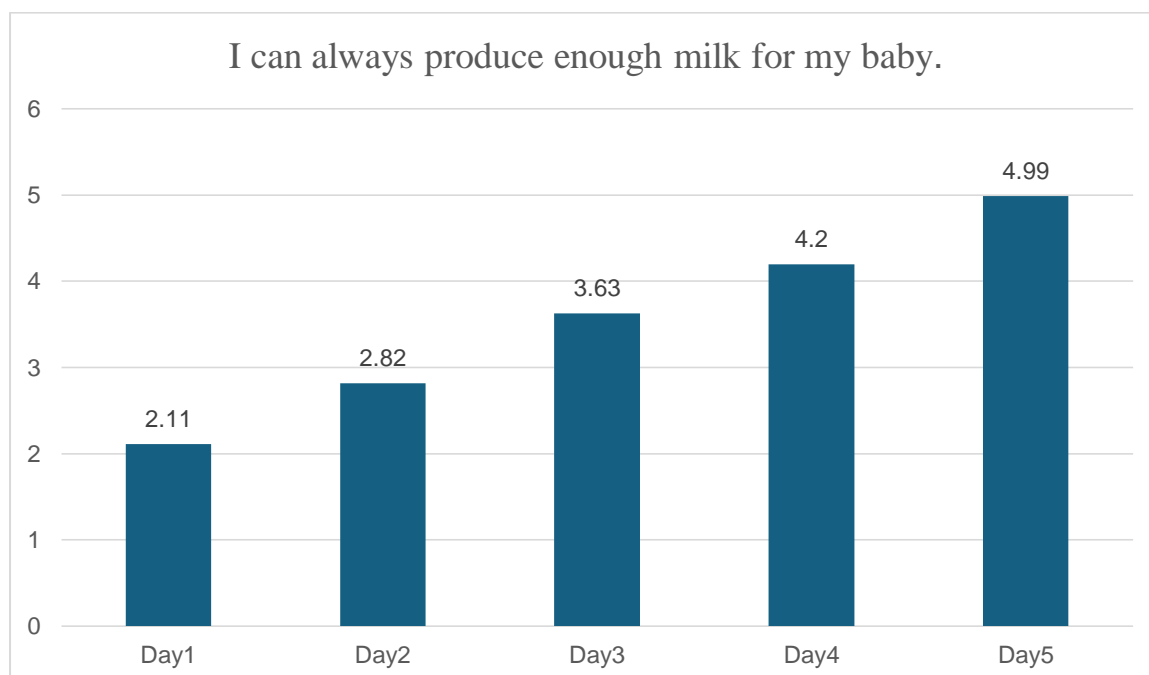


Table 33 I am consistently able to make sure my baby latches onto my breast properly.

	Mean score ± SD	Mean difference ± SD	P value
Day 1	2.20 ± 0.903		
Day 2	2.82 ± 0.942	0.626 ± 1.186	<0.001*
Day 3	3.71 ± 0.691	1.508 ± 0.912	<0.001*
Day 4	4.12 ± 0.424	1.920 ± 0.921	<0.001*
Day 5:	4.99 ± 0.073	2.797 ± 0.899	<0.001*

P value < 0.05, indicating statistical significance. A significant difference in scores was observed between Day 1 and Day 5 when mothers were asked if they were consistently able to ensure their baby latched properly (p < 0.001).

Figure 34: Bar chart showing mothers' confidence in consistently ensuring their baby latches onto the breast properly.

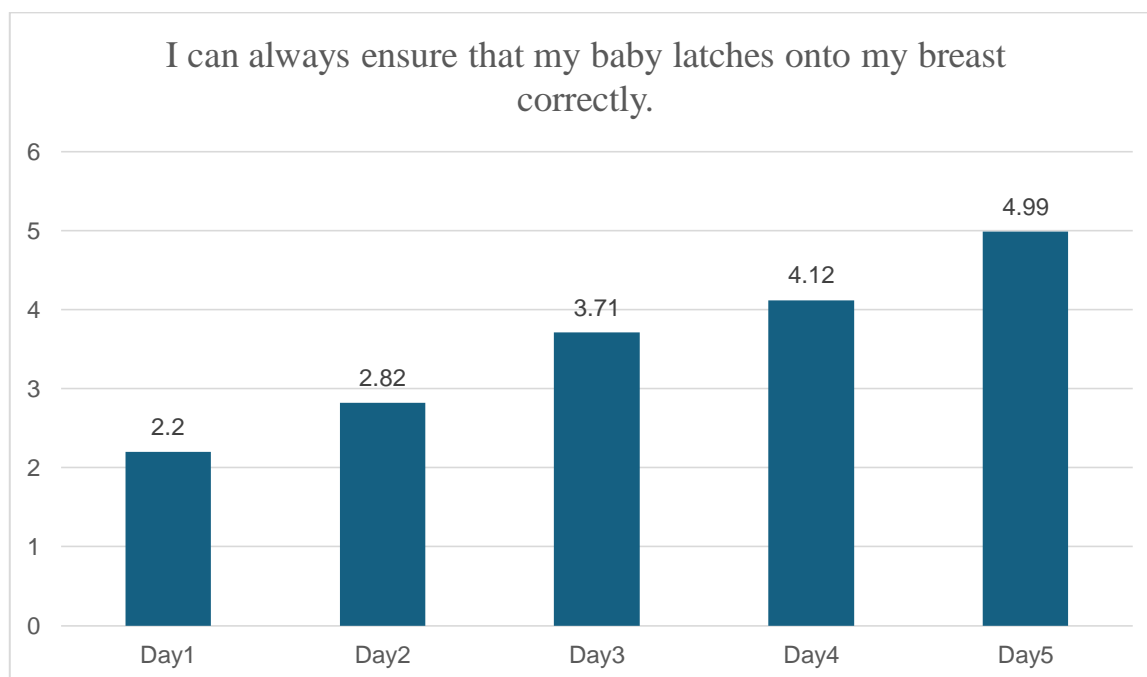


Table 34: Ability to consistently soothe my baby while breastfeeding.

	Mean score \pm SD	Mean difference \pm SD	P value
Day 1	2.34 \pm 0.903		
Day 2	2.97 \pm 0.729	0.636 \pm 0.801	<0.001*
Day 3	3.75 \pm 0.610	1.412 \pm 0.884	<0.001*
Day 4	4.05 \pm 0.378	1.711 \pm 0.917	<0.001*
Day 5	5.00 \pm 0.000	2.663 \pm 0.903	<0.001*

P value < 0.05, indicating statistical significance. A significant difference in scores was noted between Day 1 and Day 5 when mothers were asked whether they were consistently able to soothe their baby during breastfeeding ($p < 0.001$).

Figure 35: Bar diagram illustrating mothers' ability to consistently soothe their baby during breastfeeding.

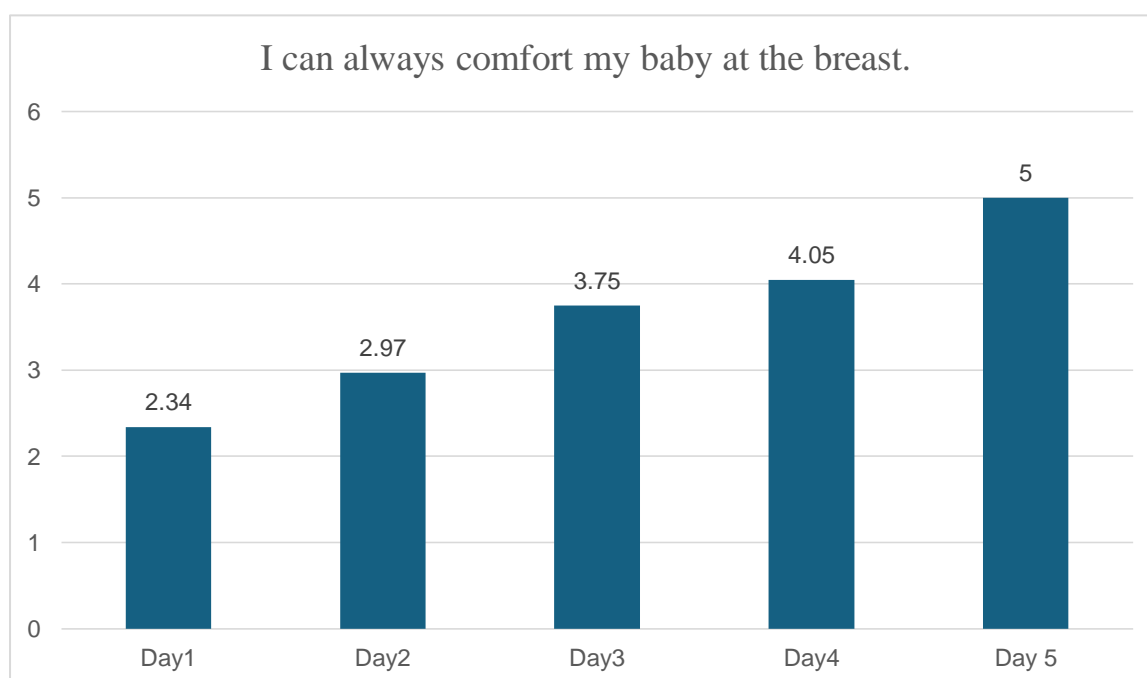


Table 35 : I am consistently able to make sure my baby receives enough milk, even when breastfeeding is difficult.

	Mean score \pm SD	Mean difference \pm SD	P value
Day 1	2.43 \pm 0.885		
Day 2	3.04 \pm 0.782	0.615 \pm 0.797	<0.001*
Day 3	3.87 \pm 0.438	1.439 \pm 0.861	<0.001*
Day 4	4.05 \pm 0.226	1.626 \pm 0.897	<0.001*
Day 5	5.00 \pm 0.000	2.572 \pm 0.885	<0.001*

P value < 0.05, indicating statistical significance. A significant difference in scores was found between Day 1 and Day 5 when mothers were asked if they were consistently able to ensure their baby received sufficient milk despite difficulties with breastfeeding (p < 0.001).

Figure 36: Bar chart illustrating mothers' confidence in ensuring their baby receives sufficient milk, even when breastfeeding is difficult.

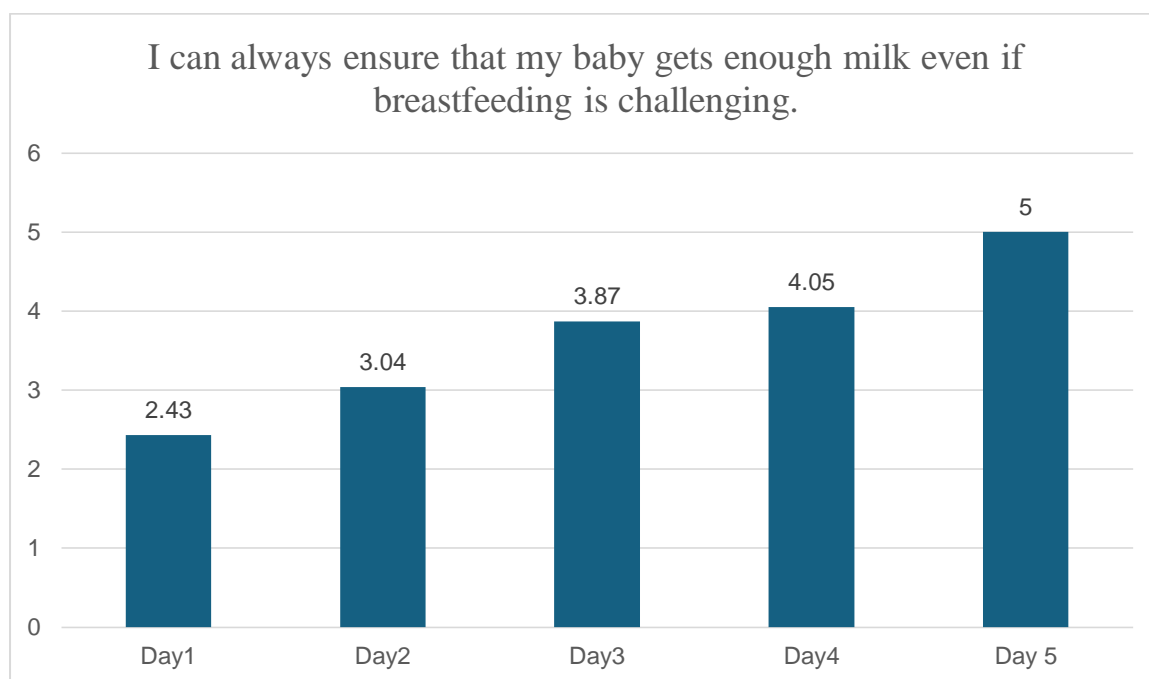


Table 36: I can always successfully breastfeed my baby, even in public places.

	Mean score \pm SD	Mean difference \pm SD	P value
Day 1	2.26 \pm 0.916		
Day 2	3.02 \pm 0.684	0.754 \pm 0.870	<0.001*
Day 3	3.92 \pm 0.342	1.658 \pm 0.928	<0.001*
Day 4	4.02 \pm 0.126	1.754 \pm 0.924	<0.001*
Day 5	5.00 \pm 0.000	2.738 \pm 0.916	<0.001*

P value < 0.05, indicating statistical significance. Scores showed a significant increase between Day 1 and Day 5 when mothers were asked if they felt confident breastfeeding their baby successfully in public places ($p < 0.001$).

Figure 37: Bar diagram depicting mothers' confidence in successfully breastfeeding their baby in public places.

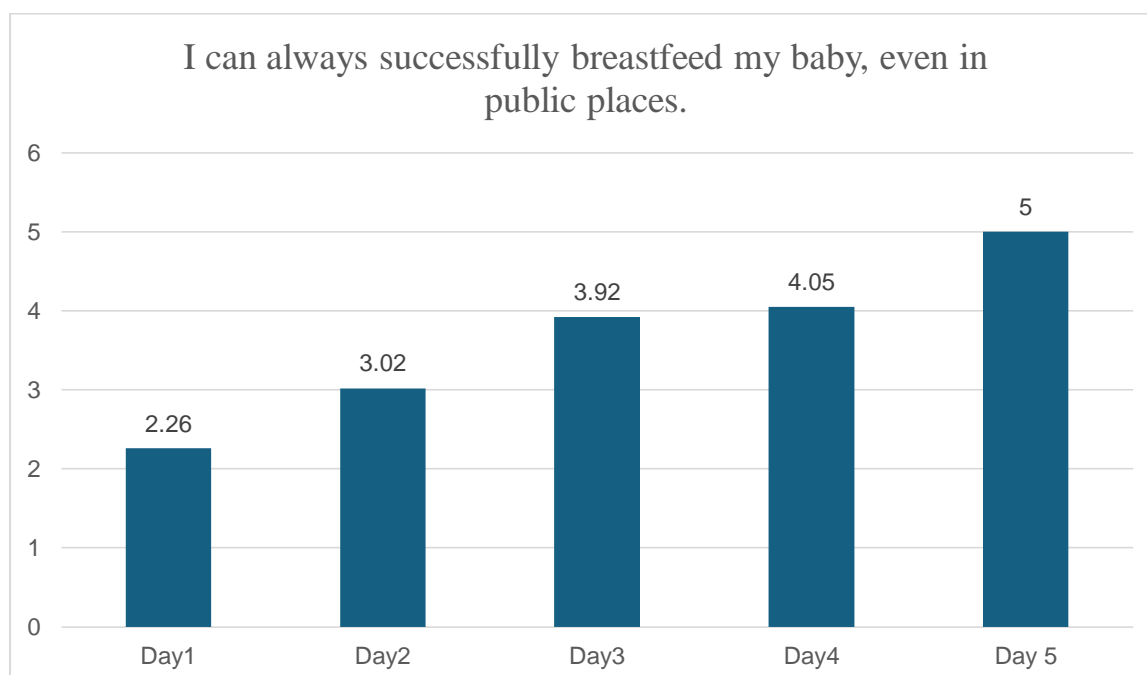
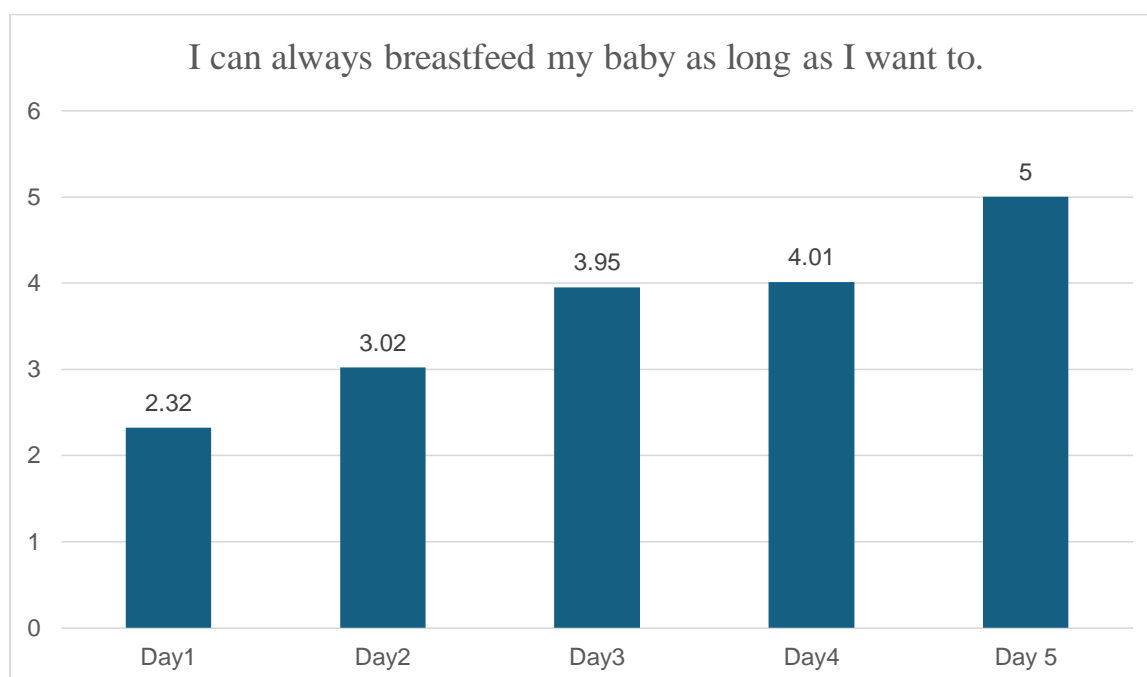


Table37: I am consistently able to breastfeed my baby for as long as I choose.

	Mean score \pm SD	Mean difference \pm SD	P value
Day 1	2.32 \pm 0.947		
Day 2	3.02 \pm 0.889	0.695 \pm 0.879	<0.001*
Day 3	3.95 \pm 0.280	1.631 \pm 0.932	<0.001*
Day 4	4.01 \pm 0.103	1.690 \pm 0.945	<0.001*
Day 5	5.00 \pm 0.000	2.679 \pm 0.947	<0.001*

P value < 0.05, indicating statistical significance. A significant difference in scores was observed between Day 1 and Day 5 when mothers were asked if they felt confident in their ability to breastfeed their baby for as long as they desired ($p < 0.001$).

Figure 38: Bar diagram illustrating mothers' ability to breastfeed their baby for as long as they desire.



DISCUSSION

DISCUSSION

This study included 187 mothers of full-term newborns delivered vaginally at R L Jalappa Hospital. The main aim was to evaluate and compare the effectiveness of the Breastfeeding Self-Efficacy Scale–Short Form (BSES-SF) and the LATCH breast feeding assessment tool in identifying breastfeeding challenges early on.

In our study, the average BSES-SF and LATCH scores both showed an upward trend from under six hours after birth to day five. Although both scores improved over time, no significant correlation was found between them. Similarly, a study by Yenil et al. examined self-efficacy scores alongside their related average LATCH scores.⁶² A statistically significant positive correlation between the mothers' average postpartum nursing self comprehensive analysis by Meedya et al., indicated that the length of breastfeeding during the first six months postpartum was prolonged when the mother had a willingness to breastfeed and demonstrated high breastfeeding self-efficacy.⁶² A research by Tokat et al., established that breastfeeding self-efficacy correlated with ability to breastfeed, as shown by the LATCH score. Breastfeeding self-efficacy in mothers is a key factor influencing successful breastfeeding outcomes and is closely related to positive breastfeeding behaviors.^{62,63} Furthermore, it has been found that elevated nursing self-efficacy may enhance moms' breastfeeding ability.

Dennis et al. highlighted four key factors influencing a mother's confidence in breastfeeding: her personal sense of accomplishment, witnessing others' successful breastfeeding, receiving verbal encouragement, and the impact of her physical and emotional reactions. Successes in breastfeeding create expectations for future achievements based on previous experiences.

Additionally, learning about positive breastfeeding experiences from others can inspire the mother to anticipate similar outcomes for herself.

Mothers' confidence in their ability to nurse their babies may also increase with positive words of encouragement from loved ones and medical experts. Lastly, physiological or emotional emotions (such as stress, worry, or weariness) might impact how a woman perceives her own ability to breastfeed. When a mother can effectively manage or overcome negative emotional or physical challenges, she is more likely to develop a higher level of breastfeeding self-efficacy.^{63,64}

According to research by Zhu et al., breast feeding self- efficacy is higher among women who have experience nursing, who see other mothers breastfeeding, and who decide to nurse earlier in pregnancy.⁶⁵

Mothers' perceptions of their own abilities and competence as nurses are profoundly affected by psychosocial variables, according to a large body of research.^{63,66,67}

Prenatal phone support, mindfulness training, home-based videoconferencing, and self-efficacy-oriented nursing therapies may increase breastfeeding self-efficacy and competence, according to previous studies.⁶³⁻⁷⁰

When obstetric nurses, midwives, and breastfeeding consultants provide support and education to mothers before, during, and after pregnancy, it greatly increases the likelihood that the mother will feel competent and confident in her ability to breastfeed and makes the decision to do so.^{71,72}

Medical professionals can help new mothers connect with their babies quickly, boost good family attitudes, and get breastfeeding started soon after giving birth.

Research conducted in Hong Kong revealed that mothers who have breastfed before are more

likely to start breastfeeding sooner and maintain it for a longer period. Other studies have similarly shown that women with previous breastfeeding experience typically have higher average scores on the BSES-SF.⁷³ A higher LATCH score was associated with beginning breastfeeding sooner and continuing for a longer period of time, according to Kumar et al. Those moms who continued breastfeeding had better LATCH scores, according to another research.^{74,75} Nursing was often started later in Turkey. Specifically, the TDHS found that only half of the babies were nursed in the first hour after delivery. For this reason, it is crucial that healthcare providers and society at whole promote breastfeeding as a healthy choice for infants and toddlers, both in our nation and throughout the globe.⁷⁰

The present research indicated that health care providers regarded the BSES-SF score to be more user-friendly than the Latch Score when evaluating DBF. When compared to the BSES-SF scoring system, the Latch score was shown to need less time for application and use. However, compared to the BSES-SF scale, health care personnel were more inclined to employ the Latch Score. It was noted by Jensen et al. that the ladies who participated in their research did not know how to properly breastfeed. Also, they saw that nurses and midwives didn't do a good job of addressing and recognizing when moms were having trouble nursing. Nurses and other medical professionals may benefit from using either the BSES-SF or the Latch score to detect breast feeding issues more quickly; however, the BSES-SF was shown to be simpler to use.

SUMMARY

SUMMARY

- This study included 187 mothers of full-term infants born through vaginal delivery at R L Jalappa Hospital, with the objective of comparing the Breastfeeding Self-Efficacy Scale–Short Form (BSES-SF) and the LATCH breastfeeding assessment tool in identifying breastfeeding difficulties early.
- In this study majority of the mothers established breast feeding within 30 minutes (41.2%), followed by 2 hours (31.6%).
- In the current study the weight loss percentage was more in Day 3 ($6.63 \pm 1.76\%$), followed by Day 2 ($6.49 \pm 1.63\%$), and Day 4 ($6.35 \pm 1.78\%$).
- In this study majority of the mothers had exclusive breast feeding (90.4%), while others used formula feed along with direct breast milk (9.6%).
- The mean BSES-SF scores were lowest at 6 hours (31.78 ± 5.87) and reached their highest value on day 5 (67.19 ± 2.57).
- The mean LATCH scores were found to be lower at 6 hours (4.52 ± 1.19) and was found to be highest at day 5 (9.59 ± 0.51).
- In our study, the average scores for both BSES-SF and LATCH increased over time; however, there was no significant correlation between the mean BSES-SF and LATCH scores.
- The LATCH score required less time to apply and use compared to the BSES-SF scale. Additionally, healthcare workers showed a greater willingness to utilize the LATCH score over the BSES-SF scale.

CONCLUSION

CONCLUSION

In our study, the mean BSES-SF and LATCH scores showed a steady rise from less than six hours after birth to the fifth day. Despite this improvement over time, no significant association was observed between the two scores. Both breastfeeding self-efficacy and LATCH assessments play a crucial role in determining a mother's ability to sustain exclusive breastfeeding. A decline in average LATCH scores during the early postpartum period may reflect a lack of adequate support from either family members or healthcare professionals. Hence, early education on proper breastfeeding practices, along with continued support after hospital discharge, is essential.

LIMITATIONS

LIMITATIONS

The limitations of this study include a limited sample size, the application of simple random sampling, and data collection being confined to a single institution.

To provide more comprehensive guidance for healthcare professionals and better support women facing challenges with breastfeeding self-efficacy, additional research comparing BSES-SF and LATCH scores during both pregnancy and the postpartum period is recommended.

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ANNEXURE

INFORMED CONSENT FORM

DATE:

I, Mr/Mrs _____, have been explained in my own vernacular language that my baby will be included in A PROSPECTIVE OBSERVATIONAL STUDY ON COMPARISON OF LATCH SCORE VS BREAST FEEDING SELF ASSESSMENT SCALE FOR EVALUATING BREAST FEEDING PROBLEMS, hereby I give my valid written informed consent without any force or prejudice for recording the observations of haematological and clinical parameters. The nature and risks involved have been explained to me, to my satisfaction. I have been explained in detail about the study being conducted. I have read the patient information sheet and I have had the opportunity to ask any question. Any question that I have asked, have been answered to my satisfaction. I provide consent voluntarily to allow my baby as a participant in this research. I hereby give consent to provide history, undergo physical examination, undergo the procedure, undergo investigations and provide its results and documents etc to the doctor / institute etc. For academic and scientific purpose the operation / procedure, etc may be video graphed or photographed. All the data may be published or used for any academic purpose. I will not hold the doctors / institute etc responsible for any untoward consequences during the procedure / study.

(Signature & Name of Pt. Attendant)
Patient/Guardian)

(Signature/Thumb impression of

(Signature & Name of Research

Witness :

person/doctor)

ಮಾಹಿತಿಯುಕ್ತ ಸಮ್ಪತ್ತಿ ನಮೂನೆ

ದಿನಾಂಕ:

ನನಗೆ, ಶ್ರೀ/ಶ್ರೀಮತಿ _____, ನನ್ನ ಸ್ವಂತ ಸ್ಥಳೀಯ ಭಾಷೆಯಲ್ಲಿ ನನ್ನ ಮಗುವನ್ನು ಸ್ತನ ಆಹಾರದ ಸಮಸ್ಯೆಗಳ ಮೌಲ್ಯಮಾಪನಕ್ಕಾಗಿ ಲ್ಯಾಜ್ ಸ್ಕೋರ್ vs ಸ್ತನ ಆಹಾರದ ಸ್ವಯಂ ಮೌಲ್ಯಮಾಪನ ಮಾಪಕದ ಹೋಲಿಕೆಯ ಕುರಿತು ಭವಿಷ್ಯದ ವೀಕ್ಷಣಾ ಅಧ್ಯಯನದಲ್ಲಿ ಸೇರಿಸಲಾಗುವುದು ಎಂದು ವಿವರಿಸಲಾಗಿದೆ. ಈ ಮೂಲಕ ನಾನು ರಕ್ತಶಾಸ್ತ್ರೀಯ ಮತ್ತು ಕ್ಲಿನಿಕಲ್ ನಿಯತಾಂಕಗಳ ಅವಲೋಕನಗಳನ್ನು ದಾಖಲಿಸಲು ಯಾವುದೇ ಬಲವಂತ ಅಥವಾ ಪೂರ್ವಾಗ್ರಹವಿಲ್ಲದೆ ನನ್ನ ಮಾನ್ಯ ಲಿಖಿತ ಮಾಹಿತಿಯುಕ್ತ ಒಪ್ಪಿಗೆಯನ್ನು ನೀಡುತ್ತೇನೆ. ಒಳಗೊಂಡಿರುವ ಸ್ವರೂಪ ಮತ್ತು ಅಪಾಯಗಳನ್ನು ನನ್ನ ತೃಪ್ತಿಗೆ ವಿವರಿಸಲಾಗಿದೆ. ನಡೆಸಲಾಗುತ್ತಿರುವ ಅಧ್ಯಯನದ ಬಗ್ಗೆ ನನಗೆ ವಿವರವಾಗಿ ವಿವರಿಸಲಾಗಿದೆ. ನಾನು ರೋಗಿಯ ಮಾಹಿತಿ ಹಾಳೆಯನ್ನು ಓದಿದ್ದೇನೆ ಮತ್ತು ಯಾವುದೇ ಪ್ರಶ್ನೆಯನ್ನು ಕೇಳಲು ನನಗೆ ಅವಕಾಶ ಸಿಕ್ಕಿದೆ. ನಾನು ಕೇಳಿದ ಯಾವುದೇ ಪ್ರಶ್ನೆಗೆ ನನ್ನ ತೃಪ್ತಿಗೆ ಉತ್ತರಿಸಲಾಗಿದೆ. ನನ್ನ ಮಗುವನ್ನು ಈ ಸಂಶೋಧನೆಯಲ್ಲಿ ಭಾಗವಹಿಸಲು ಅನುಮತಿಸಲು ನಾನು ಸ್ವಯಂಪ್ರೇರಣೆಯಿಂದ ಒಪ್ಪಿಗೆಯನ್ನು ನೀಡುತ್ತೇನೆ. ನಾನು ಈ ಮೂಲಕ ವೈದ್ಯಕೀಯ ಇತಿಹಾಸವನ್ನು ಒದಗಿಸಲು, ದೈಹಿಕ ಪರೀಕ್ಷೆಗೆ ಒಳಗಾಗಲು, ಕಾರ್ಯವಿಧಾನಕ್ಕೆ ಒಳಗಾಗಲು, ತನಿಖೆಗಳಿಗೆ ಒಳಗಾಗಲು ಮತ್ತು ಅದರ ಫಲಿತಾಂಶಗಳು ಮತ್ತು ದಾಖಲೆಗಳನ್ನು ವೈದ್ಯರು / ಸಂಸ್ಥೆ ಇತ್ಯಾದಿಗಳಿಗೆ ಒದಗಿಸಲು ಸಮ್ಮತಿಸುತ್ತೇನೆ. ಶೈಕ್ಷಣಿಕ ಮತ್ತು ವೈಜ್ಞಾನಿಕ ಉದ್ದೇಶಗಳಿಗಾಗಿ ಶಸ್ತ್ರಚಿಕಿತ್ಸೆ / ಕಾರ್ಯವಿಧಾನ ಇತ್ಯಾದಿಗಳನ್ನು ವೀಡಿಯೋಗ್ರಾಫ್ ಮಾಡಬಹುದು ಅಥವಾ ಛಾಯಾಚಿತ್ರ ಮಾಡಬಹುದು. ಎಲ್ಲಾ ಡೇಟಾವನ್ನು ಪ್ರಕಟಿಸಬಹುದು ಅಥವಾ ಯಾವುದೇ ಶೈಕ್ಷಣಿಕ ಉದ್ದೇಶಕ್ಕಾಗಿ ಬಳಸಬಹುದು. ಕಾರ್ಯವಿಧಾನ / ಅಧ್ಯಯನದ ಸಮಯದಲ್ಲಿ ವಾರ್ಡ್‌ಗೆ ಸಂಬಂಧಿಸಿದ ಯಾವುದೇ ಪರಿಣಾಮಗಳಿಗೆ ನಾನು ವೈದ್ಯರು / ಸಂಸ್ಥೆ ಇತ್ಯಾದಿಗಳನ್ನು ಹೊಣೆಗಾರರನ್ನಾಗಿ ಮಾಡುವುದಿಲ್ಲ.

(ಪ್ರತಿನಿಧಿ ಸಹಾಯಕರ ಸಹಿ ಮತ್ತು ಹೆಸರು)

(ರೋಗಿಯ/ರಕ್ಷಕರ ಸಹಿ/ಹೆಬ್ಬರಳಿನ ಗುರುತು)

(ಸಹಿ ಮತ್ತು

ಸಂಶೋಧನೆಯ ಹೆಸರು

ವ್ಯಕ್ತಿ/ವೈದ್ಯರು)

PARTICIPANT/PATIENT INFORMATION SHEET

Principal investigator: Dr .MANNE SAI TEJA / Dr. KNV. PRASAD .

I Dr.MANNE SAI TEJA , Post graduate student in Department at Sri Devraj Urs Medical College, will be conducting a study titled“**A PROSPECTIVE OBSERVATIONAL STUDY ON COMPARISON OF LATCH SCORE VS BREAST FEEDING SELF ASSESSMENT SHORT SCORE FOR EVALUATING BREAST FEEDING PROBLEMS**” for my dissertation under the guidance of Dr. KNV PRASAD Professor of Department of Paediatrics.

The study conducted by Dr. Manne Sai Teja, Postgraduate Student, R.L. Jalappa Hospital. The purpose of this study is to evaluate and compare two assessment tools used to identify breastfeeding problems in the early postpartum period. The participants admitted at RL JALLAPA hospital will be assessed for breastfeeding experience using two simple questionnaires (BSES-SF and LATCH score) within 6 hours of delivery and once daily for the next five days. These assessments will be performed by trained healthcare providers with the help of sister and will not interfere with your medical care. Participation involves no risk or cost, is entirely voluntary, and you may withdraw at any time without affecting your treatment. All information collected will be kept strictly confidential and used only for research purposes. Your refusal to participate will not prejudice you to any present or future care at this institution.

Name and Signature of the Principal Investigator

Date-

ಭಾಗವಹಿಸುವವರ/ರೋಗಿಯ ಮಾಹಿತಿ ಕೊಟ್ಟು

ಮುಖ್ಯ ಸಂಶೋಧಕರು: ಡಾ. ಸ್ವಪ್ನಾ ಸೈ ತೇಜಾ/ಡಾ. ಕಾನಿವಿ. ಪ್ರಸಾದ್

ನಾನು ಡಾ.ಮಣ್ಣೆ ಸಾಯ್ ತೇಜ , ಶ್ರೀ ದೇವರಾಜ್ ಉರ್ಸ ಮೆಡಿಕಲ್ ಕಲ್ಲೇಜ್‌ನ ವಿಭಾಗದಲ್ಲಿ ಸ್ನಾತಕೋತ್ತರ ವಿದ್ಯಾರ್ಥಿ, "ದೂಕಾಯ ಕಾರ್ಯಕ್ರಮವನ್ನು ಅನುಸರಿಸುವುದು" ಎಂಬ ಶೀರ್ಷಿಕೆಯಲ್ಲಿ ಅಧ್ಯಯನ ನಡೆಸುತ್ತೇನೆ..."ದೂಕಾಯ ಫಲಿತಾಂಶಗಳನ್ನು ಮುರಿದ LATCH ಅಂಕುಲಿಸುತ್ತಿಲ್ಲ.", ಡಾ. ಕೆಎನ್‌ವಿ ಪ್ರಸಾದ್ ಹಿರಿಯ ವಿದ್ಯಾರ್ಥಿಗಳು ಮಕ್ಕಳ ಆರೋಗ್ಯ ವಿಭಾಗದ ಪ್ರಾಧ್ಯಾಪಕರ ಮಾರ್ಗದರ್ಶನದಲ್ಲಿ ನನ್ನ ಶೋಧ ಪತ್ರಿಕೆಗೆ ಡಾ. ಮಣ್ಣೆ ಸಾಯಿ ತೇಜಾ ಅವರಿಂದ ನಡೆಸಲ್ಪಟ್ಟ ಅಧ್ಯಯನ, ಓಡಿದ ವಿದ್ಯಾರ್ಥಿ, ಆರ್.ಎಲ್. ಜಲಪ್ಪ ಆಸ್ಪತ್ರೆಗೆ ಸಲ್ಲಿಸಲಾಗಿದೆ. ಈ ಅಧ್ಯಯನದ ಉದ್ದೇಶ, ಆರಂಭಿಕ ಪ್ರಸವ ನಂತರದಾವಧಿಯಲ್ಲಿ ಹಾಲು ನೀಡುವಲ್ಲಿ ಸಮಸ್ಯೆಗಳಿಗಾಗಿ ಗುರುತಿಸಲು ಬಳಸುವ ಎರಡು ಅಂದಾಜಿನ ಸಾಧನಗಳನ್ನು ಸಮೀಕ್ಷೆ ಮಾಡುವ ಮತ್ತು ಹೋಲಿಸುವುದು. ಆರ್.ಎಲ್ ಜಲಪ್ಪ ಆಸ್ಪತ್ರೆಯಲ್ಲಿ ದಾಖಲಾದ ಭಾಗವಹಿಸುವವರ ಹಾಲಿನ ಅನುಭವವನ್ನು ಎರಡು ಸುಲಭ ಪ್ರಶ್ನಾವಳಿಗಳ (BSES-SF ಮತ್ತು LATCH ಅಂಕ) ಬಳಸಿಕೊಂಡು ಪ್ರಸವನ ನಂತರ 6 ಗಂಟೆಗಳ ಒಳಗೆ ಮತ್ತು ಮುಂದಿನ ಐದು ದಿನಗಳ ಕಾಲ ಪ್ರತಿದಿನವೂ ಅಂದಾಜಿಸಲಾಗಿದೆ. ಈ ಅಂದಾಜನೆಗಳನ್ನು ತರಬೇತಿ ಪಡೆದ ಆರೋಗ್ಯ ಸೇವಕರಿಂದ ಮತ್ತು ಸಹೋದರಿಯ ನೆರವಿನಿಂದ ನೆರವೇರಿಸಲಾಗುವುದು ಮತ್ತು ನಿಮ್ಮ ವೈದ್ಯಕೀಯ ಚಿಕಿತ್ಸೆಗೆ ಕಡ್ಡಾಯವಾಗಿಯೇ ಮಾರಕವಾಗುವುದಿಲ್ಲ. ಭಾಗವಹಿಸುವುದರಲ್ಲಿ ಯಾವುದೇ ಉಪಾಯವಿಲ್ಲ ಅಥವಾ ವೆಚ್ಚವಿಲ್ಲ, ಸಂಪೂರ್ಣವಾಗಿ ಸ್ವಯಂಪ್ರೇರಿತವಾಗಿದೆ ಮತ್ತು ನೀವು ಯಾವುದೇ ಸಮಯದಲ್ಲಿ ಹೊರಟು ಹೋಗಬಹುದು ನಿಮ್ಮ ಚಿಕಿತ್ಸೆಗೆ ಪರಿಣಾಮ ಬೀರುವುದಿಲ್ಲ. ಎಲ್ಲಾ ಸಂಗ್ರಹಿತ ಮಾಹಿತಿಯನ್ನು ಕಠಿಣವಾಗಿ ಗೌಪ್ಯವಾಗಿಡಲಾಗುತ್ತದೆ ಮತ್ತು ಕೇವಲ ಸಂಶೋಧನಾ ಉದ್ದೇಶಗಳಿಗೆ ಬಳಸಲಾಗುತ್ತದೆ. ಭಾಗವಹಿಸುವುದನ್ನು ವಿಪರೀತ ಮಾಡಿದಾಗ, ನಿಮ್ಮ ಮೇಲೆ ಈ ಸಂಸ್ಥೆಯಲ್ಲಿ ಯಾವುದೇ ವರ್ತಮಾನದ ಅಥವಾ ಭವಿಷ್ಯದ ಆರೈಕೆಮೂಡಲಿಲ್ಲ.

ಮುಖ್ಯ ಅನ್ವೇಷಕರ ಹೆಸರು ಮತ್ತು ಸಹಿ

ದಿನಾಂಕ -

PRO FORMA

NAME:

DATE OF BIRTH:

SEX:

INFORMANT:

ADDRESS:

TELEPHONE NUMBER:

UHID:

MATERNAL FACTORS:

AGE OF MOTHER:

EDUCATION LEVEL:

EMPLOYMENT STATUS:

SOCIO ECONOMIC CLASS:

MARRIAGE DURATION:

NUMBER OF BIRTHS:

TYPE OF BIRTH:

PARITY:

MOTHER BLOOD GROUP:

BABY BLOOD GROUP: TIME OF ESTABLISHMENT OF

BREAST FEEDING:

BIRTH WEIGHT:

WEIGHT LOSS PERCENTAGE:D1:_____D2:___D3:___D4:___D5:___

EXCLUSIVE BREAST FEEDING AT DISCHARGE:

BREAST-FEEDING SELF-EFFICACY SCALE-SHORT FORM

	< 6 HOURS OF BIRTH					Da y	Da y	Da y	Da y
	1	2	3	4	5	2	3	4	5
1. ನನಗೆ ಮಗುವಿಗೆ ಸಾಕಷ್ಟು ಹಾಲು ಸಿಗುತ್ತಿದೆಯೆ ಎಂದು ನಾನು ಯಾವಾಗಲೂ ನಿರ್ದರಿಸಬಹುದು.									
2. ನಾನು ಇತರ ಸವಾಲಿನ ಕಾರಣಗಳನ್ನು ಹೊಂದಿರುವಂತೆ ಸತಿಯಾದವನು ಯಾವಾಗಲೂ ರಾಜೀನಾಮೆ ನೀಡಬಹುದು.									
3. ಸಂತಾನವನ್ನು ಪೂರಕವಾಗಿ ಬಳಸದೆ ನಾನು ಯಾವಾಗಲೂ ನನಗೆ ಮಗುವಿಗೆ ಹಾಲುಣಿಸಬಹುದು.									
4. ನನಗೆ ಮಗುವು ಸಂಪೂರ್ಣ ಆಹಾರಕವಾಗಿ ಸರಿಯಾಗಿ ಜೀವಿಸಲಾರದೆ. ಎಂದು ನಾನು ಯಾವಾಗಲೂ ಖಚಿತಪಡಿಸಿಕೊಳ್ಳಬಹುದು.									
5. ನಾನು ಯಾವಾಗಲೂ ಸತಿಯಾದ ಪರಿಸ್ಥಿತಿಗಳಲ್ಲಿ ನನಗೆ ತೃಪ್ತಿಗೆ ತಕ್ಕಂತೆ ನಿರ್ದರಿಸಬಹುದು.									
6. ನನಗೆ ಮಗು ಅಳುತ್ತಿದ್ದರೂ ಸಹ ನಾನು ಯಾವಾಗಲೂ ಸತಿಯಾದವನು ನಿರ್ದರಿಸಬಹುದು.									
7. ನಾನು ಯಾವಾಗಲೂ ಸತಿಯಾದ ಮಾಡಲು ಬರೆಯುತ್ತಿರಬಹುದು.									
8. ನನಗೆ ಕುಟುಂಬದ ಸದಸ್ಯರೊಂದಿಗೆ ನಾನು ಯಾವಾಗಲೂ ಆರಾಮವಾಗಿ ಸತಿಯಾದ ಮಾಡಬಹುದು.									
9. ನನಗೆ ಸತಿಯಾದ ಅನುಭವದಿಂದ ನಾನು ಯಾವಾಗಲೂ ತೃಪ್ತಿಯಾಗಬಹುದು.									
10. ಸತಿಯಾದವನು ಸಮರ್ಥ ತೆಗೆದುಕೊಳ್ಳುತ್ತಿದೆಯೆ ಎಂಬ ಅಂಶವನ್ನು ನಾನು ಯಾವಾಗಲೂ ನಿರ್ದರಿಸಬಹುದು.									

11. ಇನ್ನೊಂದು ಸಿನಿಕೆ ಬದಲಾಯಿಸುವ ಮೊದಲು ನಾನು ಯಾವಾಗಲೂ ನನ್ನ ಮಗುವಿಗೆ ಒಂದು ಖೆರ್ ಮೆಲ್ಕೆ ಆಹಾರವನ್ನು ನೀಡುವುದನ್ನು ಮುಗಿಸಬಹುದು.									
12. ಪತ್ತೆ ಆಹಾರಕ್ಕಾಗಿ ನಾನು ಯಾವಾಗಲೂ ನನ್ನ ಮಗುವಿಗೆ ಹಾಲುಣಿಸುವುದನ್ನು ಮುಂದುವರಿಸಬಹುದು.									
13. ನನ್ನ ಮಗುವಿನ ಸಿನಿಕೆನಾದ ಬೆಡಿಕೆಗಳೆಂದಿಗೆ ನಾನು ಯಾವಾಗಲೂ ನಿವಧಿಸಬಲ್ಲೆ.									
14. ನನ್ನ ಮಗುವಿಗೆ ಸಿನಿಕೆನಾದ ಯಾವಾಗ ಮುಗಿದೆ ಎಂದು ನಾನು ಯಾವಾಗಲೂ ಹೆಚ್ಚಬಲ್ಲೆ.									

1) ವಿಶ್ವಾಸವಿಲ್ಲ ಇಲ್ಲ

4) ಅತುಲ ವಿಶ್ವಾಸ

2) ತುಂಬಾ ಅತುಲವಿಶ್ವಾಸವಿಲ್ಲ

5) ಬಹಳ ಅತುಲ ವಿಶ್ವಾಸ

3) ಕೆಲವುಮಟ್ಟಿನ ಅತುಲ ವಿಶ್ವಾಸ

Each item has a five response choices on a likert scale, from not at all confident(1point) to always confident(5points).All the items are presented positively and their scores are summed to produce a total score ranging from 14 to 70. High total scores indicate higher levels of breast- feeding self-efficacy. The study will be conducted every day from postpartum period <6 hours to 5 days.

LATCH SCORE

	0	1	2	SCORING				
				< 6hours of birth	Da y 2	Da y 3	Da y 4	Da y 5
LATCH (L)	Too sleepy or reluctant	Repeated attempts for sustained latch or suck.Hold nipple in mouth Stimulate to suck	Grasps breastLips flanged Rhythmic sucking					
AUDIBLE SWALLOWING (A)	NONE	A Few with stimulation	Spontaneous & intermittent Spontaneous & frequent					
TYPE OF NIPPLE(T)	Inverted	Flat	Everts after stimulation					
COMFORT(C)	Engorged,Cracked, Bleeding, Large blisters& bruises Severe pain	Filling Reddened/Small blisters or bruises Mild to moderate comfort	Soft,non tender					
HOLD(H)	Full assist(staff holds infant at breast)	Minimal assist(ie,elevate head of bed,place pillows for support).Teach one side;mother does other.Staff holds and mother takes over	No assist from staff Mother able to position/h old infant					
Total Score								

* Total score obtained from evaluating breast feeding is 10; a total score that is below 10 indicates that the mother requires support.

**FACTORS EFFECTING THE FEASIBILITY OF BSES-F & LATCH SCORE BY
HEALTH CARE PROVIDER**

LATCH SCORE	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
USING LATCH SCORE FOR DIRECT BREAST FEEDING ASSESSMENT IS EASY FOR ME					
I AM WILLING TO USE THE LATCH SCORE FOR DIRECT BREAST FEEDING ASSESSMENT IN FUTURE					

BSES-SF SCORE	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
USING BSES-SF SCORE FOR DIRECT BREAST FEEDING ASSESSMENT IS EASY FOR ME					
I AM WILLING TO USE THE BSES-SF SCORE FOR DIRECT BREAST FEEDING ASSESSMENT IN FUTURE					

TIME IN MINUTES	<5 MINUTES	5-10 MINUTES	10-15 MINUTES	15-20 MINUTES	>20 MINUTES
TIME TAKEN FOR APPLYING LATCH SCORE					
TIME TAKEN FOR APPLYING BSES-SF SCORE					

MASTER CHART

SL NO.	NAME	SEX	DOB	ADDRESS	INFORMANT	UHD	AGE OF MOTHER	EDUCATION LEVEL	MATERNAL FACTORS	EMPLOYMENT STATUS	SOCIO ECONOMIC STATUS
1	B/O NAGESH.CM	MALE	07-03-2024	MARATHALLI BANGALORE	MOTHER	370110	24	SECONDARY EDUCATION	NIL	HOME MAKER	LOWER MIDDLE CLASS
2	B/O SUDHA	FEMALE	13-04-2024	GANGARA BEEDI BANGALORE	MOTHER	396445	27	SECONDARY EDUCATION	HYPOTHYROID MOTHER	HOME MAKER	LOWER MIDDLE CLASS
3	B/O NIHARIKA	MALE	27-03-2024	MALUR	MOTHER	383026	26	SECONDARY EDUCATION	NIL	HOME MAKER	LOWER MIDDLE CLASS
4	B/O NOUSHEEM TAJ	FEMALE	30-03-2024	KOLAR	MOTHER	385231	20	SECONDARY EDUCATION	NIL	HOME MAKER	LOWER MIDDLE CLASS
5	B/O SUJATHA	MALE	07-04-2024	BHOVI COLONY,MULABAGAL	MOTHER	392228	28	SECONDARY EDUCATION	NIL	HOME MAKER	LOWER MIDDLE CLASS
6	B/O PADMA	MALE	07-04-2024	NEELATHUR,SRINIVASPURA	MOTHER	392209	22	BACHELOR DEGREE	LEAK PV	TEACHER	UPPER MIDDLE CLASS
7	B/O MANASA	FEMALE	07-04-2024	VIRUPAKSHAPURA,BANGALORE	MOTHER	392145	31	SECONDARY EDUCATION	HYPOTHYROID MOTHER	DAILY WAGE	LOWER MIDDLE CLASS
8	B/O ARSHIYA	MALE	08-04-2024	SRINIVASPURA	MOTHER	393344	32	SECONDARY EDUCATION	NIL	HOME MAKER	LOWER MIDDLE CLASS
9	B/O SUPRIYA	MALE	14-04-2024	MULABAGAL KOLAR	MOTHER	397278	21	SECONDARY EDUCATION	NIL	HOME MAKER	LOWER MIDDLE CLASS
10	B/O ARBIN TAJ		13-04-2024	RAHMATH NAGAR,KOLAR	MOTHER	396669	33	SECONDARY EDUCATION	NIL	HOME MAKER	UPPER MIDDLE CLASS
11	B/O AVANYA	MALE	05-04-2024	KOLAR	MOTHER	390629	35	SECONDARY EDUCATION	NIL	HOME MAKER	UPPER MIDDLE CLASS
12	B/O RAKSHITHA	MALE	31-03-2024	V.KOTA,CHITTOOR	MOTHER	385558	23	SECONDARY EDUCATION	NIL	HOME MAKER	LOWER MIDDLE CLASS
13	B/O BHAGYA.M	MALE	14-03-2024	MALUR	MOTHER	373893	28	SECONDARY EDUCATION	NIL	HOME MAKER	UPPER MIDDLE CLASS
14	B/O PRABHA	MALE	15-03-2024	KOLAR	MOTHER	373911	26	SECONDARY EDUCATION	NIL	HOME MAKER	LOWER MIDDLE CLASS
15	B/O AYESHA	MALE	09-04-2024	KOLAR	MOTHER	393619	22	SECONDARY EDUCATION	NIL	HOME MAKER	LOWER MIDDLE CLASS
16	B/O REDDAMMA	FEMALE	16-03-2024	KOLAR	MOTHER	374543	32	PRIMARY EDUCATION	NIL	HOME MAKER	LOWER MIDDLE CLASS
17	B/O INDU	FEMALE	15-03-2024	KGF	MOTHER	373941	24	SECONDARY EDUCATION	NIL	HOME MAKER	LOWER MIDDLE CLASS
18	B/O FASIIHA SULTHANA	MALE	13-04-2024	CHINTHAMANI KARNATAKA	MOTHER	396864	28	SECONDARY EDUCATION	NIL	HOME MAKER	LOWER MIDDLE CLASS
19	B/O SHILPA	FEMALE	15-03-2024	KOLAR	MOTHER	379538	21	SECONDARY EDUCATION	NIL	HOME MAKER	LOWER MIDDLE CLASS
20	B/O THAHERA	MALE	20-03-2024	KOLAR	MOTHER	377003	31	PRIMARY EDUCATION	NIL	HOME MAKER	LOWER MIDDLE CLASS
21	B/O ASMA	MALE	13-04-2024	SRINIVASPURA	MOTHER	397270	26	SECONDARY EDUCATION	NIL	HOME MAKER	LOWER MIDDLE CLASS
22	B/O NEITHRAVATHLKA	FEMALE	04-04-2024	AGRAHARA,P,KOLAR	MOTHER	388916	23	SECONDARY EDUCATION	NIL	ASHA WORKER	LOWER MIDDLE CLASS
23	B/O SIMRAN TAJ	MALE	03-04-2024	BD COLONY,KOLAR	MOTHER	388567	27	PRIMARY EDUCATION	NIL	HOME MAKER	LOWER MIDDLE CLASS
24	B/O SNEHAMAYI	MALE	06-04-2024	MALUR	MOTHER	391115	22	PRIMARY EDUCATION	NIL	HOME MAKER	LOWER MIDDLE CLASS
25	B/O PREMA	MALE	07-04-2024	CHINTHAMANI KARNATAKA	MOTHER	392255	24	PRIMARY EDUCATION	HYPOTHYROID MOTHER	HOME MAKER	LOWER MIDDLE CLASS
26	B/O RADHIKA	FEMALE	31-03-2024	MALUR	MOTHER	385538	28	SECONDARY EDUCATION	NIL	HOME MAKER	LOWER MIDDLE CLASS
27	B/O RATHNAMALA	MALE	30-03-2024	KOLAR	MOTHER	385513	26	PRIMARY EDUCATION	NIL	HOME MAKER	LOWER MIDDLE CLASS
28	B/O NASEEBA FIRDOSE	FEMALE	27-03-2024	KOLAR	MOTHER	383024	25	PRIMARY EDUCATION	HYPOTHYROID MOTHER	HOME MAKER	LOWER MIDDLE CLASS
29	B/O SHYLA	FEMALE	07-04-2024	MULABAGAL	MOTHER	392190	26	SECONDARY EDUCATION	NIL	ASHA WORKER	LOWER MIDDLE CLASS
30	B/O PAVITHRA	MALE	20-03-2024	KOLAR	MOTHER	377096	29	PRIMARY EDUCATION	NIL	HOME MAKER	LOWER MIDDLE CLASS
31	B/O KAVERI	FEMALE	27-03-2024	KOLAR	MOTHER	382774	23	PRIMARY EDUCATION	NIL	HOME MAKER	LOWER MIDDLE CLASS
32	B/O GAGANA	MALE	06-04-2024	MULABAGAL	MOTHER	392161	25	PRIMARY EDUCATION	PRE ECLAMPSIA	HOME MAKER	LOWER MIDDLE CLASS
33	B/O TAMANNA TAJ	FEMALE	16-03-2024	KOLAR	MOTHER	374545	26	PRIMARY EDUCATION	NIL	HOME MAKER	LOWER MIDDLE CLASS
34	B/O MEGHASHREE	MALE	15-03-2024	KGF	MOTHER	374518	27	PRIMARY EDUCATION	NIL	HOME MAKER	LOWER MIDDLE CLASS
35	B/O SHRUTHI	MALE	27-03-2024	KOLAR	MOTHER	382388	24	PRIMARY EDUCATION	NIL	HOME MAKER	LOWER MIDDLE CLASS
36	B/O PADMA	MALE	03-04-2024	KOLAR	MOTHER	388894	30	PRIMARY EDUCATION	HYPOTHYROID MOTHER	HOME MAKER	LOWER MIDDLE CLASS
37	B/O SWATHI	MALE	07-04-2024	MULABAGAL	MOTHER	392228	28	SECONDARY EDUCATION	PRE ECLAMPSIA	HOME MAKER	LOWER MIDDLE CLASS
38	B/O VENKATALAKSHMI	MALE	06-04-2024	SRINIVASPURA	MOTHER	392174	29	PRIMARY EDUCATION	NIL	HOME MAKER	LOWER MIDDLE CLASS
39	B/O RUGESANA	MALE	28-02-2024	KOLAR	MOTHER	365476	24	PRIMARY EDUCATION	NIL	HOME MAKER	LOWER MIDDLE CLASS
40	B/O CHAITANYA	FEMALE	13-03-2024	MALUR	MOTHER	373238	28	PRIMARY EDUCATION	NIL	HOME MAKER	LOWER MIDDLE CLASS

MARRIAGE DURATION(YEARS)	NUMBER OF BIRTHS	TYPE OF DELIVERY	MOTHER BLOOD GROUP	BABY BLOOD GROUP	TIME OF ESTABLISHMENT OF BREAST FEEDING AFTER DELIVERY(HOURS)	BIRTH WEIGHT(KG)	DAY1	DAY2	DAY3	DAY4	DAY5	EXCLUSIVE BREAST FEEDING AT THE TIME OF DISCHARGE	<6 HOURS DAY2	DAY2	DAY3	DAY4	DAY5
2	1	LSCS	A POSITIVE POSITIVE		2	2.64	4	5	4	4	3	YES	34	42	52	47	67
5	2	LSCS	B NEGATIVE	AB POSITIVE	3	2.45	8.1	8.2	6.8	6	5	YES	38	48	61	58	70
4	2	LSCS	O POSITIVE	O POSITIVE	4	2.68	5	7	9	7	5	YES	29	36	51	54	70
1	1	VAGINAL DELIVERY	A POSITIVE	O POSITIVE	30 MINUTES	2.54	5	7	9	4	5	YES	28	36	52	53	69
3	2	LSCS	O POSITIVE	O POSITIVE	4	2.7	2.6	6.9	8.6	7.5	6.4	YES	42	46	56	56	70
2	1	EMERGENCY LSCS	B POSITIVE	B POSITIVE	3	2.76	5.6	9	8.1	10	8	LACTOGEN+DBF	40	40	58	53	70
5	2	LSCS	O POSITIVE	O POSITIVE	2	2.82	6	7	6	5	4	YES	47	48	56	55	70
7	3	LSCS	O POSITIVE	O POSITIVE	2	2.86	4	6	5	4	3	YES	42	44	58	51	69
1	1	VAGINAL DELIVERY	B POSITIVE	B POSITIVE	30 MINUTES	2.6	2	3	6	7	7	YES	43	47	55	54	70
8	3	LSCS	B POSITIVE	B POSITIVE	4	3.2	3	5	6	5	4.5	YES	41	43	55	55	70
10	2	LSCS	O POSITIVE	O POSITIVE	3	2.96	3	4	6	4	3	YES	28	39	50	47	67
1	1	VAGINAL DELIVERY	O POSITIVE	O POSITIVE	30 MINUTES	2.48	6.1	7.8	9.1	9.8	10.8	LACTOGEN+DBF	38	38	49	46	64
3	2	LSCS	A POSITIVE	AB POSITIVE	2	2.8	5	6	4	3	3	YES	36	41	51	47	67
4	2	LSCS	B POSITIVE	B POSITIVE	2	3.2	4	5	4	3	2	YES	38	39	53	48	68
2	1	VAGINAL DELIVERY	A NEGATIVE	A POSITIVE	30 MINUTES	2.84	3.8	4.2	5.6	4.8	3	YES	30	42	58	53	69
3	2	VAGINAL DELIVERY	AB POSITIVE	A POSITIVE	30 MINUTES	2.32	6.6	9.6	9.8	10	9	LACTOGEN+DBF	41	42	56	56	70
1	1	LSCS	B POSITIVE	B POSITIVE	2	3.18	5	6	4	4	3	YES	33	33	43	43	59
2	4	LSCS	O POSITIVE	A POSITIVE	4	3.78	3	3	4	5	5.2	YES	43	47	57	51	70
1	1	LSCS	O POSITIVE	O POSITIVE	2	2.5	5	7	9	7	5	YES	24	35	53	53	68
7	3	LSCS	O POSITIVE	O POSITIVE	2	2.48	5	7	9	7	5	YES	30	39	55	52	67
4	1	VAGINAL DELIVERY	O POSITIVE	O POSITIVE	30 MINUTES	3.44	3	6	4	4	3	YES	40	40	58	53	70
2	1	LSCS	O POSITIVE	O POSITIVE	2	2.26	6	10	8.2	8	7	LACTOGEN+DBF	23	31	46	47	64
5	1	LSCS	A POSITIVE	O POSITIVE	2	2.56	6	7	9	6	6	YES	34	38	55	52	69
2	1	LSCS	B POSITIVE	B POSITIVE	3	2.8	4	5	5	4	3	YES	27	35	47	46	65
1	1	LSCS	AB POSITIVE	O POSITIVE	2	2.64	6	7	5	4	4	YES	27	33	51	48	67
6	2	VAGINAL DELIVERY	AB POSITIVE	B POSITIVE	1	2.48	5	7	9	7	5	YES	32	36	54	54	69
5	1	VAGINAL DELIVERY	B POSITIVE	O POSITIVE	30 MINUTES	2.54	5	7	6.5	7	5	YES	28	36	52	54	69
1	1	VAGINAL DELIVERY	B POSITIVE	O POSITIVE	30 MINUTES	2.72	5	7	6	8	7	YES	30	35	52	54	70
3	1	VAGINAL DELIVERY	O POSITIVE	B POSITIVE	30 MINUTES	2.86	6	7	5	4	4	YES	38	48	56	51	68
6	2	VAGINAL DELIVERY	B POSITIVE	B POSITIVE	30 MINUTES	3.24	5	7	11	9	8	YES	30	34	53	54	70
1	1	VAGINAL DELIVERY	AB POSITIVE	O POSITIVE	30 MINUTES	2.78	5	7	5	5	5	YES	21	26	35	42	60
2	1	VAGINAL DELIVERY	O POSITIVE	O POSITIVE	30 MINUTES	2.68	5	6	5	4	4	YES	33	41	54	50	68
1	1	VAGINAL DELIVERY	O POSITIVE	O POSITIVE2	2	3.1	4	6	6.8	7	8.9	YES	27	31	47	48	65
3	2	LSCS	O POSITIVE	A POSITIVE	3	2.8	5	9	10	9.4	8	YES	27	39	53	53	70
3	2	LSCS	B POSITIVE	A POSITIVE	3	3.52	5	7	12	9	5	YES	35	38	53	53	68
6	2	LSCS	O POSITIVE	B POSITIVE	2	2.8	6	7	5	4	4	YES	28	40	54	53	70
5	2	LSCS	B POSITIVE	O POSITIVE	2	2.6	5	6	5.6	4	4	YES	28	41	51	49	69
6	2	LSCS	O NEGATIVE	B NEGATIVE	2	2.8	5	6	5	4	4	YES	30	45	56	49	67
2	1	LSCS	AB POSITIVE	A POSITIVE1	2	2.6	3.5	6.3	5.5	5.1	3.5	YES	34	37	51	46	64
4	2	LSCS	O POSITIVE	B POSITIVE	2	3.2	5.8	6.4	4.2	4	3.8	YES	28	42	57	58	70

<6 HOURS	DAY2	DAY3	DAY4	DAY5	NEUTRAL	AGREE	STRONGLY AGREE	AGREE	STRONGLY AGREE	NEUTRAL	AGREE	STRONGLY AGREE	NEUTRAL	AGREE	STRONGLY AGREE	5-10 MINUTES	10-15 MINUTES	15-20 MINUTES	10-15 MINUTES	15-20 MINUTES
6	8	9	10	10			YES	YES			YES				YES		YES			YES
3	6	9	9	10		YES		YES			YES				YES	YES				
5	8	9	10	10		YES		YES				YES		YES			YES		YES	
3	5	8	10	10		YES		YES				YES			YES		YES		YES	
3	6	7	9	10		YES		YES				YES			YES		YES			YES
5	7	9	9	10			YES		YES		YES				YES		YES		YES	
4	6	9	9	10			YES		YES		YES			YES		YES			YES	
2	4	8	10	10		YES		YES			YES			YES			YES		YES	
4	6	7	9	10			YES		YES	YES					YES		YES		YES	
3	6	7	7	10		YES		YES			YES			YES		YES				YES
6	6	8	10	10		YES		YES			YES			YES		YES			YES	YES
3	6	7	8	8			YES		YES			YES			YES		YES		YES	
6	8	9	10	10	YES			YES			YES			YES		YES			YES	
6	8	9	9	10		YES			YES		YES			YES		YES			YES	YES
2	4	8	10	10		YES		YES				YES			YES		YES		YES	
2	4	9	10	10		YES		YES			YES			YES		YES			YES	
6	7	9	10	10		YES		YES				YES			YES		YES		YES	
3	7	9	9	10	YES				YES		YES			YES		YES		YES	YES	YES
5	8	10	10	10		YES		YES				YES			YES		YES		YES	
5	6	8	10	10		YES		YES			YES			YES		YES			YES	
5	7	8	9	10		YES		YES			YES			YES		YES			YES	
3	5	7	8	10			YES		YES		YES			YES		YES		YES	YES	
3	6	7	8	9		YES		YES			YES			YES		YES			YES	YES
3	8	10	10	10		YES			YES			YES			YES		YES		YES	YES
3	5	7	8	10		YES		YES			YES			YES		YES		YES	YES	
5	7	8	10	10		YES		YES			YES			YES		YES			YES	
5	8	10	10	10		YES			YES	YES				YES		YES			YES	YES
4	7	10	10	10		YES			YES		YES			YES			YES			
5	6	7	9	10			YES	YES						YES		YES			YES	
3	5	7	9	10		YES		YES			YES			YES		YES				YES
3	5	6	9	10		YES		YES				YES			YES		YES		YES	YES
3	6	6	9	9		YES			YES		YES			YES				YES	YES	
5	6	8	9	10	YES			YES			YES			YES			YES		YES	
3	8	10	10	10		YES			YES		YES			YES		YES			YES	
5	6	7	8	10		YES		YES		YES				YES		YES			YES	YES
5	6	8	8	9		YES		YES			YES				YES		YES		YES	
3	5	7	8	8	YES			YES			YES			YES			YES		YES	
2	7	8	10	10		YES			YES		YES			YES		YES				YES
3	7	8	9	10		YES		YES				YES			YES		YES		YES	
3	7	9	9	10			YES	YES			YES			YES			YES			YES