

## Evaluating The Role Of Latch Scoring Tool In Identifying And Correcting Breastfeeding Problems

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### ABSTRACT

**Introduction:** Breastfeeding is critical for neonatal nutrition and immunity, yet many mothers face early breastfeeding challenges that can undermine exclusive breastfeeding rates. The LATCH scoring tool offers a structured method to identify and address these challenges by assessing five essential components of breastfeeding effectiveness.

**Methodology:** A prospective observational study was conducted over 15–18 months at tertiary care hospital in Pilkhuwa, Hapur, involving 170 stable mother– neonate dyads ( $\geq 34$  weeks gestation, birth weight  $> 1.8$  kg). Each dyad was assessed on Day 1 and Day 2 postpartum using the LATCH scoring system (range: 0–10). Mothers with lower scores received one-on-one counselling focused on proper positioning, latch techniques, and comfort measures. Data was recorded in a structured format and analysed using descriptive and inferential statistics ( $p < 0.05$  considered significant).

**Results:** On Day 1, 57.1% of dyads scored 5–7, while 32.3% scored 8–10, with a mean LATCH score of 7.07. Following counselling, 81.2% scored between 8–10 on Day 2 (mean 8.69), reflecting a statistically significant improvement ( $p < 0.001$ ). Improvement in LATCH score was observed following counselling. Higher LATCH scores on Day 2 were strongly linked to successful exclusive breastfeeding at discharge and those neonates with lower initial LATCH score had higher chances of developing neonatal complications.

**Conclusion:** The LATCH scoring tool effectively identifies and corrects breastfeeding difficulties when coupled with focused counselling. Integrating routine LATCH assessments into postpartum care can enhance exclusive breastfeeding rates and promote better neonatal health outcomes.

**Keywords:** Breastfeeding, LATCH scoring, Neonate, Lactation counselling, Exclusive breastfeeding.

### 1. INTRODUCTION

A newborn's best source of nutrition is breastmilk, which has a high level of bio-efficacy, is simple to digest, easy to administer, and supplies all the fluids, energy, and nutrients required for optimal growth and development (1) because breastmilk is so important for boosting neonatal immunity and drastically lowering infant morbidity and death, the WHO highly advises starting breastfeeding within the first hour of birth. Exclusive breastfeeding is thought to be among the most successful preventative health measures in the world, with the ability to avert almost 13% of deaths in children under five years of age (2). Exclusive breastfeeding provides remarkable nutritional and immunological benefits. Breast milk is rich in vital antibodies, particularly Immunoglobulin A (IgA), offering substantial protection against gastrointestinal infections, respiratory diseases, and severe ailments like necrotizing enterocolitis (NEC) (3). Breast milk includes essential fatty acids such as arachidonic acid (ARA) and docosahexaenoic acid (DHA) which are essential for a baby's brain and nervous system development (4). Additionally, breastfeeding promotes improved mental health outcomes for both mother and child by fostering emotional connection between the mother and newborn through skin- to-skin contact (5).

Mothers face a number of obstacles while breastfeeding their new-borns such as cultural norms, religious beliefs, maternal illness, inadequate milk production, bias toward top feeds, in contrast to mothers who are motivated by supportive home environments, positive family support, and good breastfeeding knowledge (6). Inadequate positioning and latching techniques, limited support during the early postpartum period, and concerns about potential breastfeeding challenges often lead mothers to discontinue breastfeeding. Those who experience difficulties are also less likely to attempt breastfeeding in future pregnancies (7).

Proper breastfeeding techniques, including maternal positioning, infant latch quality, audible swallowing, nipple condition after feeding, and maternal comfort, are essential for breastfeeding success. Poor execution of these techniques commonly results in breastfeeding complications such as insufficient milk transfer, maternal discomfort, nipple trauma, and mastitis, significantly shortening breastfeeding duration (8,9). Hence, targeted education, practical training, and real-time support for

mothers are crucial to overcoming these technical barriers and promoting sustained exclusive breastfeeding,

The role of healthcare providers in supporting successful breastfeeding practices is pivotal. Effective lactation counselling, supportive healthcare policies, and community-based interventions significantly enhance breastfeeding initiation, duration, and exclusivity<sup>(10)</sup>. Campaigns to raise awareness and workplace practices that encourage breastfeeding mothers returning to work are particularly crucial. To facilitate early identification and resolution of breastfeeding challenges, structured clinical assessment tools have been introduced. The LATCH scoring system, evaluating latch quality, audible swallowing, nipple type, maternal comfort, and infant holding position, is one such reliable tool. It enables healthcare providers to promptly identify breastfeeding problems and offer timely interventions, significantly improving breastfeeding outcomes<sup>(4, 11)</sup>. Healthcare providers utilize the LATCH scoring system, developed by Deborah Jensen in 1993, to evaluate the efficacy and quality of breastfeeding. LATCH stands for the acronym for the five essential elements of breastfeeding: Latching, Audible swallowing, Type of nipple, Comfort, and Hold. Each of these categories is assigned a score between 0 and 2, with a total possible score of 10. A higher score means that breastfeeding is more effective, suggesting that the mother and infant have a well-established breastfeeding relationship with minimal difficulties. The system is widely used in clinical settings, as it provides a structured method for evaluating breastfeeding and guiding interventions when issues arise.<sup>(12)</sup>

The first component, **\*\*L (Latching) \*\***, refers to how well the infant can latch onto the mother's breast. A good latch involves the infant taking a greater portion of the mother's areola (the area around the nipple) into their mouth. This deep latch helps prevent nipple soreness and allows efficient milk transfer.<sup>(13)</sup>

The second component, **\*\*A (Audible swallowing) \*\***, evaluates whether the healthcare provider can hear the infant swallowing during breastfeeding. Audible swallowing indicates that the baby is successfully extracting milk and swallowing it, which is a good sign of adequate milk intake.<sup>(14)</sup>

The third component, **\*\*T (Type of nipple) \*\***, assesses the condition and type of mother's nipple, as this can impact the infant's capability to latch successfully.<sup>(15)</sup>

The fourth component, **\*\*C (Comfort) \*\***, assesses the mother's degree of comfort while breastfeeding in terms of her physical and mental health. The experience of breastfeeding should be comfortable for the mother, but it can sometimes cause discomfort or pain.<sup>(16)</sup>

The final component, **\*\*H (Hold) \*\***, assesses the mother's ability to hold the baby in a way that supports effective breastfeeding. Proper positioning and support for the infant are essential to help the baby latch comfortably and maintain a good position during feeding.<sup>(17)</sup>

The LATCH score is between 0 and 10, where higher numbers indicate more effective and comfortable breastfeeding. A score closer to 10 suggests that the mother and infant have established a successful breastfeeding routine, with minimal need for external intervention. On the other hand, a lower score indicates areas where support and guidance may be required to help the mother and baby achieve effective breastfeeding. The LATCH scoring system serves as both an assessment and teaching tool, enabling healthcare providers to identify specific issues, offer targeted assistance, and track the progress of breastfeeding over time. To facilitate early identification and resolution of breastfeeding challenges, structured clinical assessment tools have been introduced. The LATCH scoring system, evaluating latch quality, audible swallowing, nipple type, maternal comfort, and infant holding position, is one such reliable tool.<sup>(11)</sup>. By consistently applying the LATCH tool in clinical settings, healthcare teams can provide proactive, targeted breastfeeding support to ensure mothers and infants establish a successful feeding routine.<sup>(18)</sup>

Several breastfeeding assessment instruments have been found by previous reviews that concentrated on affluent nations, but none of them have been firmly established as the gold standard. High-quality studies to evaluate the efficacy of current breastfeeding tools for assessment are required. One constraint in this area is the absence of "gold standard" technologies for newborns. The LATCH tool with extensive evaluation can be used as a standard tool and hence the above study was conducted to evaluate the role of latch scoring tool in identifying and correcting breastfeeding problems.

## 2. MATERIALS AND METHODS

**Study place-** The study was conducted at GS Medical College and Hospital in Pilkhuwa, Hapur, for a period of 15-18 months (June 2023 to December 2024)

**Study design-** Prospective observational study.

### **Inclusion criteria-**

Neonates born at GS Medical College and Hospital after a gestational period of at least 34 weeks.

Neonates weighing more than 1.8 kg at birth.

Mothers who provided informed consent to participate in the study.

**Exclusion criteria-**

Sick newborns requiring intensive care.

Neonates with congenital anomalies that could affect breastfeeding e.g. cleft lip, cleft palate, mandibular malformations, tracheoesophageal fistula, duodenal atresia, intestinal atresia, or any other problems that will interfere with successful breastfeeding.

Neonates born <34 weeks of gestation.

Neonates weighing less than 1.8 kg at birth.

Mothers requiring intensive postpartum care, limiting their ability to breastfeed.

Cases where breastfeeding was medically contraindicated - Suspected Inborn errors of metabolism, galactosemia, Mother HIV positive, Mother on chemotherapy and on drugs deemed non-compatible with breastfeeding.

**Sample size-** Using a 95% confidence level and a 5% margin of error, the sample size was calculated as follows:

$$n = Z^2 \times p \times q / d^2$$

where Z is 1.96

here P is prevalence of inadequate breast feeding based on previous studies,

Q= 1-p

$$n = (1.96)^2 \times (0.122) \times (1-0.122) / (0.05)^2$$

n = 164 (rounded up to 170 to accommodate potential dropouts).

**Data analysis-** All collected data was analysed using **IBM SPSS version 27**. Descriptive statistics (mean, standard deviation, percentages) were used to summarize continuous and categorical variables. A **p-value of <0.05** was considered statistically significant.

**Ethical consideration-** The study was conducted after getting approval from the Institutional Ethics Committee. Written informed consent was obtained from all participating mothers, ensuring they were fully aware of the study’s purpose, procedures, and confidentiality policies. The study adhered to the ethical principles outlined in the Declaration of Helsinki for human research.

Data was collected through direct observation, maternal interviews, and medical records. Each mother-neonate dyad was assigned a LATCH score, which was documented on a structured LATCH assessment card, forming part of the patient’s medical record. Breastfeeding challenges were noted, and mothers with low scores received special care alongwith counselling in a supportive manner, respecting cultural sensitivities around breastfeeding. No financial incentives were offered to participants, minimizing bias in enrolment.

**3. RESULTS**

**Table 1: Postnatal Initiation of Breastfeeding**

Parameter	Frequency (n)	Percentage (%)
Initiation within 1 hour	8	4.7
Initiation between 1–2 hours	19	11.2
Initiation > 2 hours	143	84.1

Breastfeeding initiation varied among mothers, with 8 (4.7%) starting within an hour, 19 (11.2%) between 1–2 hours, and 143 (84.1%) after two hours.

**Table 2: LATCH Score Distribution on Day 1**

LATCH Score Range	Frequency (n)	Percentage (%)
0–4	18	10.6
5–7	97	57.1
8–10	55	32.3
<b>Mean (SD)</b>	7.07 (1.82)	—

On Day 1, LATCH scores varied among participants, with 18 (10.6%) scoring between 0–4, 97 (57.1%) in the 5–7 range, and 55 (32.3%) achieving 8–10. The mean score was 7.07 (SD 1.82), indicating moderate initial breastfeeding effectiveness, with room for improvement through targeted support.

**Table 3: LATCH Score Distribution on Day 2**

LATCH Score Range	Frequency (n)	Percentage (%)
0–4	0	0
5–7	32	18.8
8–10	138	81.2
<b>Mean (SD)</b>	8.69 (1.19)	—

On Day 2, LATCH scores showed significant improvement, with no participants scoring in the 0–4 range. While 32 (18.8%) scored between 5–7, the majority (138; 81.2%) achieved scores of 8–10. The mean LATCH score increased to 8.69 (SD 1.19), reflecting enhanced breastfeeding effectiveness following targeted counselling.

**Table 4: Comparison of LATCH Scores on Day 1 vs. Day 2**

Day	Mean LATCH Score (SD)	Statistical Test
Day 1	7.07 (1.8)	Paired t-test, $p < 0.001$
Day 2	8.69 (1.19)	

The comparative analysis of which reveals significant improvement from Day 1 to Day 2. Mean scores increased from 7.07 to 8.69. Statistical analysis using a paired t-test yielded  $p < 0.001$ , confirming that targeted breastfeeding counselling significantly enhances breastfeeding efficiency within the early postnatal period. These results robustly support counselling benefits.

**Table 5: LATCH Score Distribution by Mode of Delivery (Day 1)**

Mode of Delivery	Mean LATCH Score (SD)	p-value (t-test)
Vaginal	7.70 (1.57)	< 0.001
Caesarean	5.31 (1.22)	

Comparative analysis by mode of delivery shows that vaginal deliveries achieved a higher mean LATCH score of 7.70 compared to 5.31 for caesarean sections on Day 1. The significant difference ( $p < 0.001$ ) suggests that vaginal delivery may facilitate better early breastfeeding techniques compared to caesarean.

**Table 6: Improvement in LATCH Score after Counselling (Initial Score < 7)**

The	Group (Initial LATCH < 7)	Mean LATCH Score Day 1 (SD)	Mean LATCH Score Day 2 (SD)	p-value (paired t-test)
	n = 53	4.92 (0.7)	8.13 (1.3)	< 0.001

improvement in LATCH scores after counselling was analyzed for mothers whose initial LATCH score was less than 7. Among 53 dyads, the mean LATCH score on Day 1 was 4.92 with a standard deviation (SD) of 0.7. After counselling, the mean LATCH score on Day 2 increased to 8.13 with an SD of 1.3. The paired t-test yielded a p-value of less than 0.001, indicating a statistically significant improvement in LATCH scores after counselling.

**Table 7: Frequency of Abnormal LATCH Components on Day 1**

LATCH Component	Frequency with Abnormality (n)	Percentage (%)
L (Latching)	81	47.6
A (Audible swallowing)	99	58.2
T (Type of nipple)	89	52.3
C (Comfort)	98	57.6
H (Hold)	100	58.8

Among the participants, 81 (47.6%) had abnormalities in the Latching component. Audible swallowing was affected in 99 cases, accounting for 58.2% of the sample. Abnormalities in the Type of nipple were observed in 89 participants (52.3%), while Comfort issues were reported in 98 cases (57.6%). The highest frequency of abnormality was found in the Hold component, with 100 participants (58.8%) experiencing difficulties. These findings suggest that multiple aspects of the LATCH assessment were impacted on Day 1, with Hold and Audible swallowing being the most commonly affected

components.

**Table 8: LATCH Score Subcomponent Breakdown on Day 1**

Subcomponent	Mean Score (SD)
L (Latching)	1.47 (0.60)
A (Audible Swallowing)	1.39 (0.55)
T (Type of nipple)	1.44 (0.56)
C (Comfort)	1.41 (0.52)
H (Hold)	1.36 (0.58)

The breakdown of LATCH score subcomponents on Day 1 was analyzed, showing mean scores and standard deviations (SD) for each category. The Latching subcomponent had a mean score of 1.47 with an SD of 0.60. The Audible swallowing subcomponent had the low mean score of 1.39 with SD of 0.5. The Type of nipple, Comfort, and Hold subcomponents all had similar mean scores of 1.44 with an SD of 0.56, 1.41 with an SD of 0.52, and

1.36 with an SD of 0.58, respectively. These findings suggest that all subcomponents of the LATCH score were affected to a similar extent on Day 1.

**Table 9: LATCH Score Subcomponent Breakdown on Day 2**

Subcomponent	Mean Score (SD)
L (Latching)	1.76 (0.43)
A (Audible swallowing)	1.69 (0.49)
T (Type of nipple)	1.76 (0.43)
C (Comfort)	1.72 (0.43)
H (Hold)	1.76 (0.43)

The LATCH score subcomponent breakdown on Day 2 showed improvements across all categories compared to Day 1. The Latching subcomponent had a mean score of 1.76 with an SD of 0.43. The Audible swallowing subcomponent had a mean score of 1.69 with an SD of 0.49, indicating a slight improvement from Day 1. The Type of nipple, and Hold subcomponents had mean scores of 1.76 with an SD of 0.43. Comfort’s mean score was 1.72 and SD of 0.43. These results indicate an overall improvement in LATCH scores from Day 1 to Day 2, with all subcomponents showing higher mean scores, particularly in Latching, Comfort, and Hold.

**Table 10: LATCH Score and Exclusive Breastfeeding at Discharge**

LATCH Score Category (Day 2)	Exclusive Breastmilk feeding Rate (%)
0–4	0
5–7	9.4
8–10	64.5

The above table show that exclusive breastmilk feeding rates and not giving formula feed at discharge varied by day 2 LATCH score categories. Dyads scoring 5–7 had 9.4%, and those scoring 8–10 achieved 64.5% of the exclusive breastfeeding rate at discharge; this progressive trend emphasizes the predictive value of higher LATCH scores for successful exclusive breastmilk feeding and avoiding formula feeding.

**Table 11: Association between day1 LATCH score and Neonatal complications**

LATCH Score Category (Day 1)	Neonatal Complications (%)
< 7	71.7
≥ 7	23.9

The association between day 1 LATCH scores and neonatal complications was analyzed. Among neonates with a LATCH score < 7 on day 1, 71.7% experienced neonatal complications, and those with a LATCH score of equal to or greater than 7, only 23.9% of them experienced complications. These findings suggest that lower LATCH scores on day 1 may be associated with a higher likelihood of neonatal complications.

#### 4. DISCUSSION

In our study, early initiation of breastfeeding was often delayed. Only 4.7% of mothers began breastfeeding within the first hour after birth, 11.2% did so between 1–2 hours, and the vast majority (84.1%) initiated breastfeeding only after two hours. Despite these delays, an encouraging 90% of mother-neonate dyads experienced immediate skin-to-skin contact post-delivery, a practice known to heighten neonatal reflexes and facilitate better latching. These findings suggest that although timely initiation was suboptimal, the widespread use of skin-to-skin contact likely helped mitigate the negative impacts of delayed feeding on early breastfeeding success. Fadiloglu et al.<sup>(19)</sup> demonstrated that initiating breastfeeding within 30 minutes postpartum markedly increased LATCH scores at each session; also, immediate skin to skin contact improved the odds ratio of having a LATCH score of more than 8. Gercek et al.<sup>(20)</sup> reported similar finding where skin to skin contact immediately after birth was associated with better breastfeeding self-efficacy. Our observations also align with these insights. This likely contributed to the observed increase in mean LATCH scores from 7.07 on Day 1 to 8.69 on Day 2. Overall, this highlights a complex interplay between initiation timing and supportive practices: when early initiation is delayed, compensatory strategies like skin-to-skin contact can play a vital role in boosting breastfeeding outcomes<sup>(21,22,23)</sup>.

On Day 1 postpartum, the LATCH score distribution in our cohort indicated a moderate level of breastfeeding effectiveness with room for improvement. The mean LATCH score was 7.07 ± 1.8. Most dyads, around 97 of them (57.1%), fell into the middle score range of 5–7; one-third of them, about 55 (32.3%), achieved high scores of 8–10; and 18 (10.6%) scored in the low range of 0–4. This suggests that while a majority of mother neonate pairs managed a fair score initially, a substantial fraction started with suboptimal performance. Similarly, Abbas & Hasan<sup>(24)</sup> found that nearly half of new mothers in their study had only moderate LATCH scores in the first days, illustrating how common early breastfeeding challenges can be. Our Day 1 results underscore the value of early assessment to identify those dyads who may require additional support from

the very beginning. Notably, this need for prompt intervention is often pronounced in certain situations; for example, mothers who have caesarean deliveries tend to have lower initial LATCH scores and thus require extra help establishing breastfeeding<sup>(25)</sup>. Early identification of low or middling scores allows healthcare providers to initiate targeted counselling and support immediately, aiming to elevate breastfeeding performance in the critical first days. Importantly, initial LATCH scores can also be prognostic of longer-term outcomes.

By Day 2, after implementing targeted breastfeeding counselling, we observed a marked improvement in LATCH scores across the board. The average LATCH score rose to 8.69 (SD 1.19), and the distribution shifted dramatically: none of the dyads remained in the low range (0–4), only 18.8% scored in the mid-range (5–7), and the vast majority (81.2%) achieved high LATCH scores of 8–10. A paired comparison confirms that this Day 1-to-Day 2 improvement was statistically significant ( $p < 0.001$ ). These results vividly demonstrate the efficacy of early, focused lactation interventions in enhancing breastfeeding effectiveness within a very short period of time. Our findings are in line with those of Shah et al.<sup>(21)</sup>, who reported that mothers with initial LATCH scores around 6 experienced significant gains after counselling and that higher post-counselling scores were associated with improved exclusive breastfeeding outcomes at six weeks. Likewise, Srinivasan et al.<sup>(22)</sup> study showed that addressing specific latch problems (for instance, via frenotomy for tongue-tie) led to marked improvements in the score and a reduction in maternal pain. Overall, the significant improvement from Day 1 to Day 2 confirms that structured lactation support can rapidly and substantially boost breastfeeding performance<sup>(21, 26, 27, 22)</sup>.

There was a significant positive correlation between gestational age and Day 1 LATCH scores. In our data, neonates born at later gestational ages tended to have more effective latch performance ( $r = 0.82$ ,  $p = 0.001$ ). This strong correlation underscores that neonatal maturity is a key factor in early breastfeeding success: more mature (full-term or near-term) newborns generally have stronger suckling reflexes, better muscle tone, and greater coordination, all of which facilitate effective latching and feeding. This finding is supported by previous studies. Tornese et al.<sup>(27)</sup> reported that full-term neonates achieved significantly higher LATCH scores than premature neonates.

Mode of delivery was another factor that significantly affected initial breastfeeding outcomes. We found that mothers who had vaginal deliveries obtained a much higher mean LATCH score on Day 1 (7.70, SD 1.57) compared to those who delivered via caesarean section (mean 5.31, SD 1.22), a difference that was statistically significant ( $p < 0.001$ ). This result indicates that a caesarean birth can pose challenges to the immediate initiation of breastfeeding. Our findings are consistent with Çakmak et al.<sup>(25)</sup> who reported that the mothers who underwent caesareans had lower initial LATCH scores than those with vaginal births. Karimi et al.<sup>(28)</sup> likewise found that caesarean delivery was associated with reduced early LATCH scores and a higher need for formula supplementation, further highlighting the obstacles faced by these mothers. In summary, our data indicate that mode of delivery is a critical factor in early breastfeeding success, with caesarean deliveries requiring a more proactive support approach to overcome initial lactation barriers<sup>(25,28)</sup>.

In the subgroup of mother-neonate dyads who had suboptimal initial LATCH scores ( $<7$  on Day 1), we observed a remarkable improvement following targeted breastfeeding counselling. Their mean LATCH score rose from  $4.92 \pm 0.7$  on Day 1 to  $8.13 \pm 1.3$  on Day 2 ( $p < 0.001$ ). This dramatic increase demonstrates that even dyads with poor initial scores can substantially benefit from timely, individualized intervention. Our findings align with previous reports: Shah et al.<sup>(21)</sup> noted significant LATCH score gains in mothers who started with low scores, which corresponded with higher exclusive breastfeeding rates weeks later. Abbas & Hasan<sup>(24)</sup> also observed that nearly half of mothers with moderate initial scores achieved better LATCH score outcomes with appropriate support.

An analysis of the LATCH score subcomponents on Day 1 revealed high frequencies of specific breastfeeding difficulties. In our sample, 47.6% of mothers had problems with the latch component, and issues were even more common in other domains, like 58.2% had inadequate audible swallowing, 52.3% had problem with type of nipple, 57.6% experienced maternal breast/nipple discomfort, and 58.8% required significant assistance with positioning or hold. These results highlight the particular aspects of breastfeeding that most often pose challenges in the immediate postpartum period, underscoring the need for targeted interventions focused on those areas. Similar patterns have been noted by other researchers. For instance, Raphael et al.<sup>(29)</sup> reported that comfort component scored better initially most likely due to the fact that issues that cause discomfort while breastfeeding, like breast engorgement or sore/cracked nipples, typically appear later in the postpartum phase. The "Audible swallowing" component in their study had low scores on both tests. Comfort component was more affected in their study group who delivered via caesarean. Çakmak et al.<sup>(25)</sup> observed that latch and positioning problems were more common among mothers who had caesarean deliveries, suggesting that certain breastfeeding difficulties may require specialized attention in that context.

For a more granular assessment, we examined each component of the LATCH score. On Day 1, all five components (latch, audible swallowing, nipple type, maternal comfort, and hold) had mean scores around 1.3–1.4 (out of 2), indicating moderate



performance across the board. This suggests that no single aspect was overwhelmingly deficient, though the hold and comfort scores were slightly lower than the latch score, pointing to areas where support might be especially needed. By Day 2, after counselling, each component's mean increased to approximately 1.6–1.7, reflecting notable improvements across the board. The consistency of these gains shows that our intervention effectively addressed the full spectrum of breastfeeding difficulties. These findings mirror reports of variability in LATCH sub-scores and confirm the potential for targeted counselling to enhance each specific domain.

A particularly noteworthy finding was the strong association between Day 2 LATCH scores and exclusive breastfeeding (EBF) status at hospital discharge, with 9.4% of those having moderate scores (5–7) on day 2 and as many as 64.5% of those with high scores (8–10) were exclusively breastfeeding. This clear gradient demonstrates the prognostic value of higher LATCH scores for successful exclusive breastfeeding in the short term. Our observation is supported by previous studies: Shah et al.<sup>(21)</sup> found that a LATCH score above 6 at discharge was strongly associated with higher exclusive breastfeeding rates and adequate neonates weight gain by six weeks postpartum.

Finally, the study reveals a link between initial latch effectiveness and neonatal health outcomes. When comparing neonatal complications, 71.7% experienced complications with a LATCH score of less than 7, whereas those neonates with a score of equal to or more than 7 only 23.93% experienced complications. This observation is consistent with earlier research by Tornese et al.<sup>(27)</sup>, who noted that lower early LATCH scores corresponded to a higher likelihood of not breastfeeding exclusively, which can be viewed as an indirect predictor of neonatal feeding problems. Moreover, Nommsen-Rivers.<sup>(30)</sup> In his study reported that early breastfeeding difficulties, including a poor latch, were significantly associated with delayed onset of milk production and increased risk of undue neonate's weight loss and other health complications.

The findings strengthen these insights by providing clear evidence that a suboptimal score on Day 1 can serve as an early warning sign for potential neonatal morbidity. When a low LATCH score is identified, immediate interventions, such as intensive lactation, should be initiated to mitigate risks and improve the neonate's outcomes. In summary, the association between a lower Day 1 LATCH score and higher neonatal complication rates highlights the need for targeted early interventions<sup>(27,30)</sup>.

Ultimately, the evidence supports routine incorporation of LATCH assessments into clinical practice to promote better maternal and neonate's health outcomes and to reinforce the benefits of exclusive breastfeeding during the crucial early postpartum period.

## 5. CONCLUSION

LATCH assessments into routine postpartum care can significantly benefit both mothers and newborns. Early identification of breastfeeding challenges, followed by tailored lactation support, can promote exclusive breastfeeding, improve neonatal outcomes, and contribute to more confident, capable mothers. As such, structured lactation counselling should be recognized as an essential component of postnatal healthcare, guided by the actionable insights provided by the LATCH tool

## REFERENCES

- [1] Kramer MS, Kakuma R. Optimal duration of exclusive breastfeeding.
- [2] Cochrane Database Syst Rev. 2012 Aug 15;2012(8):CD003517.
- [3] Alshiek M. Breastfeeding among infants and its association with the nutritional status of children under five years in Khartoum, Sudan. *Int J Healthc Sci.* 2015;3:177–84.
- [4] Donald K, Petersen C, Turvey SE, Finlay BB, Azad MB. Secretory IgA: Linking microbes, maternal health, and infant health through human milk. *Cell Host Microbe.* 2022 May 11;30(5):650-9.
- [5] Colombo J, Jill Shaddy D, Kerling EH, Gustafson KM, Carlson SE. Docosahexaenoic acid (DHA) and arachidonic acid (ARA) balance in developmental outcomes. *Prostaglandins Leukot Essent Fatty Acids.* 2017 Jun;121:52-6.
- [6] Moore ER, Bergman N, Anderson GC, Medley N. Early skin-to-skin contact for mothers and their healthy newborn infants. *Cochrane Database Syst Rev.* 2016 Nov 25;11(11):CD003519.
- [7] Gala Z, Shetye S, Sadawarte DM, Autade M. Barriers in exclusive breastfeeding encountered by mothers in urban slum area of a metropolitan city. *J Family Med Prim Care.* 2023 Nov;12(11):2690-5
- [8] Rollins NC, Bhandari N, Hajeebhoy N, Horton S, Lutter CK, Martines JC, et al. Why invest, and what it will take to improve breastfeeding practices. *Lancet.* 2016 Jan 30;387(10017):491-504.
- [9] Karaçam Z, Sağlık M. Breastfeeding problems and interventions performed on problems: systematic review based on studies made in Turkey. *Turk Pediatri Ars.* 2018 Sep;53(3):134-48.

- [10] Valero-Chillerón MJ, Mena-Tudela D, Cervera-Gasch Á, González-Chordá VM, Soriano-Vidal FJ, Quesada JA, et al. Influence of Health Literacy on Maintenance of Exclusive Breastfeeding at 6 Months Postpartum: A Multicentre Study. *Int J Environ Res Public Health*. 2022 Apr 29;19(9):5411.
- [11] McFadden A, Gavine A, Renfrew MJ, Wade A, Buchanan P, Taylor JL, et al. Support for healthy breastfeeding mothers with healthy term babies. *Cochrane Database Syst Rev*. 2017 Feb 28;2(2):CD001141.
- [12] Çetindemir EO, Cangöl E. The effect of breastfeeding education given through the teach-back method on mothers' breastfeeding self-efficacy and breastfeeding success: a randomized controlled study. *BMC Pregnancy Childbirth*. 2024 Jun 29;24(1):453.
- [13] Halgar K, Mangshetty RB, B. AA. LATCH score: a tool for identification and correction of breastfeeding problems in a tertiary care hospital of North Karnataka. *Int J Contemp Pediatr*. 2024 Feb 22;11(3):272-6.
- [14] Hall RT, Mercer AM, Teasley SL, McPherson DM, Simon SD, Santos SR, et al. A breast-feeding assessment score to evaluate the risk for cessation of breast-feeding by 7 to 10 days of age. *J Pediatr*. 2002 Nov;141(5):659-64
- [15] Howe TH, Lin KC, Fu CP, Su CT, Hsieh CL. A review of psychometric properties of feeding assessment tools used in neonates. *J Obstet Gynecol Neonatal Nurs*. 2008;37(3):338-49.
- [16] Ballard JL, Auer CE, Khoury JC. Ankyloglossia: assessment, incidence, and effect of frenuloplasty on the breastfeeding dyad. *Pediatrics*. 2002 Nov;110(5):e63.
- [17] Mulder PJ. A concept analysis of effective breastfeeding. *J Obstet Gynecol Neonatal Nurs*. 2006;35(3):332-9.
- [18] Power RF, Murphy JF. Tongue-tie and frenotomy in infants with breastfeeding difficulties: achieving a balance. *Arch Dis Child*. 2015 May;100(5):489-94
- [19] Lakshman TK, Sripooja G. LATCH score: efficacy in parturients with term vaginal delivery vs term caesarean section: clinical study at rural tertiary care hospital. *Int J Acad Med Pharm*. 2024;6(2):1223-6.
- [20] Fadiloglu E, Karatas E, Tez R, Cagan M, Unal C, Nar M, et al. Assessment of Factors Affecting Breastfeeding Performance and Latch Score: A Prospective Cohort Study. *Z Geburtshilfe Neonatol*. 2021 Aug;225(4):353-60
- [21] Gerçek E, Sarıkaya Karabudak S, Ardiç Çelik N, Saruhan A. The relationship between breastfeeding self-efficacy and LATCH scores and affecting factors. *J Clin Nurs*. 2017 Apr;26(7-8):994-1004.
- [22] Shah MH, Roshan R, Parikh T, Sathe S, Vaidya U, Pandit A. LATCH Score at Discharge: A Predictor of Weight Gain and Exclusive Breastfeeding at 6 weeks in Term Healthy Babies. *J Pediatr Gastroenterol Nutr*. 2021 Feb 1;72(2):e48-e52
- [23] Srinivasan A, Dobrich C, Mitnick H, Feldman P. Ankyloglossia in breastfeeding infants: the effect of frenotomy on maternal nipple pain and latch. *Breastfeed Med*. 2006;1(4):216-24
- [24] Kim B, Kim J. Influence of an early latching-on program on the breastfeeding rate. *Perspect Nurs Sci*. 2013;10(2):97-110
- [25] Abbas I.M. and Hasan, R.T., 2015. Assessment of LATCH tool regarding initiation of breastfeeding among women after childbirth. *Assessment*, 2015 May;5(05).
- [26] Cakmak H, Kuguoglu S. Comparison of the breastfeeding patterns of mothers who delivered their babies per vagina and via cesarean section: an observational study using the LATCH breastfeeding charting system. *Int J Nurs Stud*. 2007 Sep;44(7):1128-37
- [27] Lau Y, Htun TP, Lim PI, Ho-Lim S, Klainin-Yobas P. Psychometric Evaluation of 5- and 4-Item Versions of the LATCH Breastfeeding Assessment Tool during the Initial Postpartum Period among a Multiethnic Population. *PLoS One*. 2016;11(5):e0154331
- [28] Tornese G, Ronfani L, Pavan C, Demarini S, Monasta L, Davanzo R. Does the LATCH score assessed in the first 24 hours after delivery predict non- exclusive breastfeeding at hospital discharge. *Breastfeed Med*. 2012 Dec;7(6):423-30
- [29] Karimi S, Majid N, Naghizadeh MM, Nekoe F, Kamali M. Comparison of breastfeeding patterns in women with normal vaginal delivery and cesarean section. *Iran J Obstet Gynecol Infertil*. 2011 Dec 22;14(6):46-53
- [30] Rapheal SM, Rajaiah B, Karupanan R, Abiramalatha T, Ramakrishnan S. LATCH Score for Identification and Correction of Breastfeeding Problems A Prospective Observational Study. *Indian Pediatr*. 2023 Jan 15;60(1):37-40
- [31] Nommsen-Rivers L. Early breastfeeding difficulties: incidence and risk factors. *J Hum Lact*. 2004 Feb;20(1):101-2.