Original Article

Identification and Correction of Early Breastfeeding Problems Using "Latch Score"

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Abstract

Background: Early breastfeeding is critical for neonatal and maternal health, yet many mothers encounter difficulties in the immediate postnatal period. The present study aimed to identify early breastfeeding problems using the LATCH score, provide targeted corrective interventions, and assess improvement within 6-12 hours postpartum. **Material and Methods:** This hospital-based cross-sectional observational study included 200 mother–infant dyads. LATCH scoring was performed at 6–12 hours postpartum. Mothers with scores <8 received individualized interventions including counselling, positioning guidance, and assisted latch. Reassessment was conducted at 24–48 hours. Statistical analysis was performed using SPSS, with $p<0.05$ considered significant. **Results:** A high prevalence of breastfeeding difficulties was observed, with 82.5% of mothers having LATCH scores <8 at 6–12 hours (mean 6.30±1.63). The most common problems were positional difficulty (26.0%) and poor attachment (18.5%). Corrective interventions were required in 82.5% of cases and showed a strong association with low LATCH scores ($p=0.001$). Following intervention, significant improvement was observed, with mean LATCH scores increasing to 9.19±1.25 ($p<0.001$). The proportion of mothers achieving adequate scores (≥8) rose from 17.5% to 86.0%, with 94.5% showing improvement and none deteriorating. Among mothers with initially low scores, 84.2% improved to ≥8. Significant factors associated with poor breastfeeding performance included younger maternal age ($p=0.001$), primiparity, lack of prior breastfeeding experience, delayed initiation, and non-exclusive feeding ($p<0.001$). **Conclusion:** Early breastfeeding difficulties are highly prevalent but largely modifiable. Use of the LATCH score with timely interventions leads to rapid and significant improvement in breastfeeding outcomes.

Keywords: LATCH score, breastfeeding, lactation counselling, early initiation, postnatal care.

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Introduction

Breastfeeding is universally recognized as the optimal form of infant nutrition, offering unmatched immunological, nutritional, and developmental benefits. Human milk contains a dynamic combination of macronutrients, micronutrients, bioactive components, antibodies, and living cells that cannot be replicated by artificial feeds. In view of these advantages, global health authorities recommend early initiation of breastfeeding within the first hour of birth, exclusive breastfeeding for the first six months, and its continuation along with complementary feeding up to two years or beyond.[1] These practices are associated with a significant reduction in infant morbidity and mortality, particularly from infections such as diarrhoea and pneumonia, while also supporting neurodevelopment and long-term protection against metabolic diseases.[2,3] Additionally, breastfeeding provides substantial maternal health benefits, including reduced risks of postpartum haemorrhage, breast and ovarian cancers, and type 2 diabetes mellitus.[4]

Despite these well-established benefits, early breastfeeding remains challenging for many mothers. A large proportion experience difficulties during the initial postnatal period, including poor latch, ineffective suckling, nipple pain, breast engorgement, and perceived insufficient milk supply.[5–7] These early issues are critical, as they are strongly associated with delayed initiation, supplementation with formula feeds, and early discontinuation of exclusive breastfeeding.[8] The first 24 to 48 hours after delivery are particularly crucial for establishing effective breastfeeding, as this period influences maternal confidence, infant feeding patterns, and the initiation of lactogenesis.[9] Ineffective feeding during this phase may lead to a cycle of poor milk transfer, reduced milk production, and increased maternal anxiety, ultimately compromising breastfeeding success.[10]

In routine clinical practice, assessment of breastfeeding is often subjective and inconsistent, leading to under-recognition of early problems. To overcome this limitation, standardized tools such

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as the LATCH scoring system have been developed.[11] This system evaluates five key components—latch, audible swallowing, type of nipple, maternal comfort, and positioning—providing an objective score to assess breastfeeding effectiveness. Lower scores have been associated with adverse outcomes such as early cessation of breastfeeding and neonatal complications.[12,13] Importantly, the LATCH score not only facilitates early identification of problems but also guides targeted corrective interventions and allows reassessment of improvement over time.[14,15]

Given the importance of early detection and timely intervention, the present study focuses on identifying breastfeeding problems using the LATCH score and evaluating the effectiveness of corrective measures through reassessment within 24–48 hours. This approach aims to strengthen early breastfeeding support and improve overall maternal and neonatal outcomes.

Materials and Methods

After obtaining approval from the Institutional Ethics Committee, this hospital-based cross-sectional observational study was conducted among 168 mother–infant dyads admitted to the postnatal wards during the study period who fulfilled the predefined inclusion and exclusion criteria. The study was undertaken in the postnatal wards of M.T. Hospital, Indore, Madhya Pradesh, India, over a period of 18 months. Written informed consent was taken from all participants. Confidentiality was maintained, and participation was voluntary, with the option to withdraw at any stage without affecting medical care.

Inclusion Criteria

All breastfeeding mothers who had delivered healthy term neonates and were rooming-in with their babies were included in the study.

Exclusion Criteria

Mother–infant dyads were excluded if:

- The neonate required admission to the neonatal intensive care unit
- The mother was unable to breastfeed due to medical or surgical conditions
- The neonate had congenital anomalies interfering with breastfeeding, such as cleft lip, cleft palate, choanal atresia, or Pierre Robin syndrome

Methodology: After obtaining written informed consent, eligible mother–infant dyads were enrolled in the study. Relevant maternal and neonatal history along with clinical details were recorded using a predesigned proforma. The LATCH score was assessed between 6 to 12 hours after birth by the same in-charge resident doctor to ensure uniformity. The assessment included five components: latch, audible swallowing, type of nipple, maternal comfort (breast/nipple), and hold (positioning and assistance). Each component was scored from 0 to 2, resulting in a total score ranging from 0 to 10. A score of ≥8 was considered satisfactory, whereas a score <8 was considered unsatisfactory, indicating breastfeeding difficulty.

Intervention: Based on the initial LATCH assessment, individualized counselling and breastfeeding support were provided. Corrective measures included demonstration of appropriate breastfeeding positions such as cradle and cross-cradle hold, guidance on side-lying position for post-caesarean mothers, education on signs of effective latch and attachment using visual aids, and practical assistance with positioning and attachment during feeding. Mothers were encouraged to practice these techniques under supervision during subsequent feeding sessions.

Reassessment: The LATCH score was reassessed at 24–48 hours after delivery following the corrective interventions. Both the initial and post-intervention assessments were performed by the same observer to minimize inter-observer variability and ensure consistency.

LATCH Scoring System: The LATCH scoring system is a standardized clinical tool developed in 1994 to objectively assess breastfeeding effectiveness, replacing subjective descriptions with a structured scoring method.[11] It evaluates five parameters represented by the acronym LATCH: latch, audible swallowing, type of nipple, comfort, and hold. Each parameter is scored from 0 to 2, with a total score ranging from 0 to 10. A score of 8–10 indicates effective breastfeeding, 4–7 suggests moderate difficulty requiring support, and 0–3 reflects poor breastfeeding with a high risk of failure. Scores below 8 are generally considered unsatisfactory and warrant targeted lactation support.[16]

LATCH Scoring System for Assessment of Breastfeeding

Component	Score 0	Score 1	Score 2
L – Latch	No latch achieved	Repeated attempts; holds nipple in mouth; requires stimulation to suck	Grasps breast; tongue down; lips flanged; rhythmic sucking
A – Audible Swallowing	None heard	A few swallows with stimulation	Spontaneous and frequent swallowing
T – Type of Nipple	Inverted	Flat	Everted (protrudes after stimulation)
C – Comfort (Breast/Nipple)	Severe discomfort; cracked, bleeding or bruised nipples; engorgement	Mild/moderate discomfort; reddened areas or small blisters	Breasts soft; nipples tender but intact
H – Hold (Positioning)	Full assistance required	Minimal assistance required	Mother able to position and hold infant independently

Scoring Interpretation

- 8–10 → Effective breastfeeding
- 4–7 → Moderate difficulty (requires support)
- 0–3 → Poor breastfeeding (high risk of failure)

Outcome Measures: The primary outcome was the identification of early breastfeeding problems using the LATCH score. Secondary outcomes included improvement in LATCH scores following corrective interventions, types of breastfeeding-related problems encountered, and maternal satisfaction after receiving breastfeeding support.

Statistical Analysis: Data were entered into Microsoft Excel and analyzed using SPSS version 25.0. Continuous variables were

expressed as mean ± standard deviation, and categorical variables as frequencies and percentages. The Chi-square test and unpaired t-test were applied where appropriate. A p-value <0.05 was considered statistically significant.

Results

The study included 200 mother–infant dyads in the early postnatal period. The majority of mothers (61.5%) belonged to the 20–30 years age group, followed by those above 30 years (27.5%) and teenage mothers (<20 years) constituting 11.0%. Most participants were multiparous (67.5%) and had previous breastfeeding experience (67.5%). A significant proportion (63.0%) had not received antenatal breastfeeding counselling. The majority of deliveries were normal vaginal (61.5%), while 38.5% were caesarean sections. Most neonates had normal birth weight (59.5% between 2.5–3.0 kg) and good Apgar scores, with minimal need for resuscitation, indicating a relatively healthy study population. [Table 1]

Table 1: Socio-Demographic, Obstetric, and Neonatal Profile of Study Participants (N = 200)

Variable	Category	Frequency (n)	Percentage (%)
Maternal Age	<20 years	22	11.0
	20–30 years	123	61.5
	>30 years	55	27.5
Education Level	Illiterate/None	16	8.0
	Primary	35	17.5
	High School	87	43.5
	Graduate and above	62	31.0
Parity	Primipara	65	32.5
	Multipara	135	67.5
Previous Breastfeeding Experience	Yes	135	67.5
	No	65	32.5
ANC Breastfeeding Counselling	Yes	74	37.0
	No	126	63.0
Mode of Delivery	Normal Vaginal Delivery	123	61.5
	Caesarean Section	77	38.5
	Instrumental Delivery	0	0.0
Birth Weight	<2.5 kg	16	8.0
	2.5–3.0 kg	119	59.5
	>3.0 kg	65	32.5
Baby Gender	Male	99	49.5
	Female	101	50.5
Apgar Score	7	18	9.0
	8	99	49.5
	9	83	41.5
Initial Resuscitation	No	176	88.0
	Yes	24	12.0

The assessment of LATCH scores at 6–12 hours postpartum showed that most mothers had moderate breastfeeding performance, with a mean score of 6.3 and 82.5% having scores <8, indicating that effective breastfeeding was not well established in the early postnatal period. Breastfeeding problems were identified in 82.5% of mothers, with positional difficulty (26.0%) and poor attachment (18.5%) being the most common, followed by flat or inverted nipples and inadequate milk supply, suggesting that most issues were related to modifiable technical factors. A statistically significant association (p = 0.001) was observed between low LATCH scores and the presence of breastfeeding problems, confirming the reliability of the LATCH score as an early assessment tool. Regarding feeding practices, only 46.5% of mothers initiated breastfeeding within the first hour of birth, although 68.5% practiced exclusive breastfeeding, indicating suboptimal early initiation despite acceptable feeding practices. Overall, these findings highlight a high prevalence of early breastfeeding difficulties, largely due to correctable factors, emphasizing the importance of timely identification and intervention. [Table 2]

Table 2: Early Breastfeeding Assessment, Problems, and Feeding Practices (N = 200)

Variable	Category	Frequency (n)	Percentage (%)
LATCH Score (6–12 hrs)	3	1	0.5
	4	28	14.0
	5	38	19.0
	6	46	23.0
	7	52	26.0
	8	11	5.5
	9	13	6.5
	10	11	5.5
LATCH Category	Poor (0–3)	1	0.5
	Moderate (4–7)	164	82.0
	Good (8–10)	35	17.5

Binary Classification	Low (<8)	165	82.5
	Adequate (≥8)	35	17.5
Breastfeeding Problems	No problem	35	17.5
	Positional difficulty	52	26.0
	Poor attachment	37	18.5
	Flat/Inverted nipple	29	14.5
	Inadequate milk supply	28	14.0
	Cracked nipple	13	6.5
	Engorgement	6	3.0
Association (LATCH vs Problems)	Problem present (LATCH <8)	165	82.5
	No problem (LATCH ≥8)	35	17.5
Time of First Feed	Within 1 hour	93	46.5
	After 1 hour	107	53.5
Type of First Feed	Exclusive breastfeeding	137	68.5
	Formula/Top feed	33	16.5
	Mixed feeding	30	15.0

The majority of mothers (82.5%) required corrective interventions in the early postnatal period, reflecting the high prevalence of low LATCH scores and early breastfeeding difficulties. Counselling with positioning guidance (27%) was the most common intervention, followed by assisted latch (18.5%) and syringe technique (15%), indicating that improper positioning and poor attachment were key issues. A statistically significant association ($p = 0.001$) was observed between low LATCH scores and the need for intervention, with all mothers requiring support having scores <8. These findings highlight the usefulness of the LATCH score in identifying problems and guiding timely, targeted interventions to improve breastfeeding outcomes. [Table 3]

Table 3: Corrective Interventions and Their Association with LATCH Score (N = 200)

Variable	Category	Frequency (n)	Percentage (%)
Type of Intervention	No intervention required	35	17.5
	Counselling & positioning guidance	54	27.0
	Assisted latch	37	18.5
	Syringe technique	30	15.0
	Counselling & frequent feeding	26	13.0
	Apply expressed milk	12	6.0
	Warm compress	6	3.0
Association with LATCH Score (6–12 hrs)	Intervention given (LATCH <8)	165	82.5
	No intervention required (LATCH ≥8)	35	17.5

Reassessment at 24–48 hours postpartum showed a marked improvement in breastfeeding performance, with 63.5% of mothers achieving a LATCH score of 10 and a mean score rising to 9.19 ± 1.25. The proportion of mothers with good scores (8–10) increased significantly from 17.5% to 86.0%, while moderate scores declined from 82.0% to 14.1%, with no mothers remaining in the poor category ($p < 0.001$). Among those with initially low scores, 84.2% improved to ≥8, while all mothers with adequate initial scores maintained their performance. Overall, 94.5% showed improvement, indicating that early identification and targeted interventions are highly effective in improving breastfeeding outcomes. [Table 4]

Table 4: Reassessment of LATCH Score at 24–48 Hours and Comparison with Baseline (N = 200)

Variable	Category	Frequency (n)	Percentage (%)
LATCH Score (24–48 hrs)	4	1	0.5
	5	1	0.5
	6	4	2.0
	7	22	11.0
	8	24	12.1
	9	21	10.6
	10	127	63.5
LATCH Category Comparison	Poor (0–3) → 24–48 hrs	0	0.0
	Moderate (4–7) → 24–48 hrs	28	14.1
	Good (8–10) → 24–48 hrs	172	86.0
Change from 6–12 hrs	Improved	189	94.5
	No change	11	5.5
	Worsened	0	0.0
Cross-tabulation (6–12 hrs vs 24–48 hrs)	Low (<8) → remained <8	26	15.8
	Low (<8) → improved to ≥8	139	84.2
	Adequate (≥8) → remained ≥8	35	100.0
Overall at 24–48 hrs	LATCH <8	26	13.0
	LATCH ≥8	174	87.0

The analysis showed that maternal age had a significant association with LATCH scores (p = 0.001), with younger mothers having poorer outcomes. Parity and previous breastfeeding experience were highly significant determinants (p < 0.001), with primiparous mothers and those without prior experience having uniformly low scores. Early feeding practices also showed strong significance, as initiation within one hour and exclusive breastfeeding were associated with better LATCH scores (p < 0.001). In contrast, educational status (p = 0.189), antenatal counselling (p = 0.184), mode of delivery (p = 0.709), and neonatal factors such as birth weight (p = 0.952), gender (p = 0.155), and resuscitation (p = 0.802) were not statistically significant. Overall, early breastfeeding performance was mainly influenced by maternal experience and modifiable practices. [Table 5]

Table 5: Factors Affecting LATCH Score at 6–12 Hours (N = 200)

Variable	Category	LATCH <8 n (%)	LATCH ≥8 n (%)	Total	p-value
Maternal Age	<20 years	22 (100.0)	0 (0.0)	22	0.001*
	20–30 years	106 (86.2)	17 (13.8)	123	
	>30 years	37 (67.3)	18 (32.7)	55	
Education Level	Illiterate/None	14 (87.5)	2 (12.5)	16	0.189 (NS)
	Primary	33 (94.3)	2 (5.7)	35	
	High School	69 (79.3)	18 (20.7)	87	
	Graduate+	49 (79.0)	13 (21.0)	62	
Parity	Primipara	65 (100.0)	0 (0.0)	65	<0.001*
	Multipara	100 (74.1)	35 (25.9)	135	
Previous BF Experience	Yes	100 (74.1)	35 (25.9)	135	<0.001*
	No	65 (100.0)	0 (0.0)	65	
ANC Counselling	Yes	65 (87.8)	9 (12.2)	74	0.184 (NS)
	No	100 (79.4)	26 (20.6)	126	
Mode of Delivery	NVD	100 (81.3)	23 (18.7)	123	0.709 (NS)
	LSCS	65 (84.4)	12 (15.6)	77	
Time of First Feed	Within 1 hour	58 (62.4)	35 (37.6)	93	<0.001*
	After 1 hour	107 (100.0)	0 (0.0)	107	
Type of First Feed	Exclusive BF	102 (74.5)	35 (25.5)	137	<0.001*
	Formula/Top feed	33 (100.0)	0 (0.0)	33	
	Mixed feeding	30 (100.0)	0 (0.0)	30	
Birth Weight	<2.5 kg	13 (81.2)	3 (18.8)	16	0.952 (NS)
	2.5–3.0 kg	99 (83.2)	20 (16.8)	119	
	>3.0 kg	53 (81.5)	12 (18.5)	65	
Baby Gender	Male	86 (86.9)	13 (13.1)	99	0.155 (NS)
	Female	79 (78.2)	22 (21.8)	101	
Resuscitation at Birth	No	145 (82.4)	31 (17.6)	176	0.802 (NS)
	Yes	20 (83.3)	4 (16.7)	24	

*Statistically significant

Discussion

The present study evaluated early breastfeeding problems using the LATCH scoring system, assessed the effectiveness of corrective interventions, and examined factors influencing breastfeeding performance in the immediate postnatal period. The findings demonstrate a high prevalence of early breastfeeding difficulties, with 82.5% of mothers having LATCH scores <8 at 6–12 hours postpartum, indicating suboptimal breastfeeding. Similar observations have been reported by Rapheal et al. (2023),[17] and Lingala et al,[18] (2025) who found that a majority of mothers had low LATCH scores in the early hours after delivery, reinforcing that breastfeeding challenges are common during this critical period.

In the present study, positional difficulty (26.0%) and poor attachment (18.5%) were the most common breastfeeding problems, followed by flat or inverted nipples and inadequate milk supply. These findings are consistent with Rapheal et al. (2023),[17] who reported a high need for assistance with positioning, and Dewey et al. (2003),[19] who identified anatomical factors such as nipple abnormalities as contributors to suboptimal breastfeeding. The predominance of positioning and attachment-related issues highlights that most early breastfeeding problems are modifiable and can be effectively addressed with appropriate support.

A key strength of the study was the demonstration of significant improvement in breastfeeding performance following targeted interventions. The mean LATCH score increased from 6.30 ± 1.63 at 6–12 hours to 9.19 ± 1.25 at 24–48 hours, with 94.5% of mothers showing improvement and none deteriorating. Comparable improvements have been reported by Halgar et al. (2024),[20] Lingala et al (2025),[18] and Verma et al (2025),[21] all of whom documented significant increases in LATCH scores following structured breastfeeding support (p < 0.001). These consistent findings across studies strongly support the effectiveness of early identification and intervention in improving breastfeeding outcomes.

The study also identified important determinants of early breastfeeding performance. Maternal age showed a significant association (p = 0.001), with younger mothers demonstrating poorer LATCH scores. This is in agreement with Lingala et al. (2025),[18] suggesting that maternal maturity and confidence play a role in breastfeeding success. Parity and previous breastfeeding experience were highly significant factors (p < 0.001), with primiparous mothers and those without prior experience showing

uniformly low scores. Similar findings have been reported by Dewey et al. (2003),[19] and Karthika et al (2019),[22] emphasizing the importance of experiential learning in breastfeeding.

Among modifiable factors, early initiation of breastfeeding and exclusive breastfeeding were strongly associated with better LATCH scores ($p < 0.001$). Mothers who initiated feeding within one hour had significantly better outcomes, while none of those with delayed initiation achieved adequate scores. These findings are consistent with Gerçek et al. (2017),[23] who demonstrated improved LATCH scores with early initiation. The strong association with exclusive breastfeeding further highlights the importance of avoiding early supplementation, which may interfere with effective latch and milk transfer.

In contrast, maternal education, antenatal counselling, and mode of delivery did not show significant associations with early LATCH scores. Similar observations have been reported in some studies, although others, such as Lakshman and Sripooja (2024),[24] have found better outcomes with vaginal delivery. The lack of association in the present study may reflect variability in the quality of counselling or the provision of uniform postnatal support to all mothers. Neonatal factors, including birth weight, gender, and need for resuscitation, were also not significantly associated with breastfeeding performance, suggesting that early difficulties are more related to maternal and technique-related factors than neonatal characteristics.

The strong correlation between low LATCH scores and the presence of breastfeeding problems, as well as the need for intervention, confirms the clinical utility of the LATCH scoring system. Previous studies by Sowjanya et al. (2018),[25] and Shah et al. (2021),[26] have also demonstrated that LATCH scores are predictive of future breastfeeding outcomes, reinforcing its role as both a diagnostic and prognostic tool. Its simplicity and ease of use make it particularly suitable for routine application in busy postnatal wards.

The study has several strengths, including the use of a standardized assessment tool, prospective design, and evaluation of outcomes before and after intervention. However, certain limitations must be acknowledged. Being a single-center study, the findings may not be generalizable to all settings. The follow-up period was limited to 48 hours, and long-term breastfeeding outcomes were not assessed. Additionally, psychosocial factors such as maternal confidence and family support were not evaluated.

In conclusion, the present study highlights a high prevalence of early breastfeeding difficulties, primarily due to modifiable factors such as poor positioning and attachment. The significant improvement in LATCH scores following targeted interventions underscores the importance of early assessment and structured support. The findings support the integration of LATCH scoring into routine postnatal care to facilitate timely identification and management of breastfeeding problems, ultimately improving maternal and neonatal outcomes.

Conclusion

This study highlights that early breastfeeding difficulties are common in the immediate postnatal period, predominantly driven by modifiable factors such as poor positioning and ineffective latch. The LATCH scoring system proved to be a simple, objective, and clinically valuable tool for early identification of these problems. Importantly, timely and targeted interventions resulted in rapid and significant improvement in breastfeeding performance within 24–48 hours, with the majority of mothers achieving effective feeding before discharge.

The findings emphasize that early assessment combined with structured lactation support can substantially enhance breastfeeding outcomes. Integrating routine LATCH scoring into postnatal care has the potential to bridge gaps in early breastfeeding practices, strengthen maternal confidence, and promote sustained exclusive breastfeeding, ultimately contributing to improved maternal and neonatal health.

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Conflicts of interest

There are no conflicts of interest.

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