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Original Research Article

LATCH SCORE AS A TOOL TO PREDICT EXCLUSIVE BREAST FEEDING AT SIX MONTHS POSTPARTUM - A CROSS SECTIONAL STUDY

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ABSTRACT

Background: Breastfeeding necessitates appropriate infant neurobehavioral development, effective management of child breathing, sucking and swallowing pattern, as well as a motivated and comfortable mother.1 Breastfeeding is seen as a crucial intervention to decrease death rates in infants and children under five years of age. The objective is to utilize the LATCH score as a predictive tool for exclusive breastfeeding [EBF] at six months postpartum, focusing on its application during the initial 48 hours post- delivery. **Materials and Methods:** This cross-sectional study was conducted after clearance from Board of Studies and Ethical committee in the Department of Paediatrics, Rohilkhand Medical college and Hospital, Bareilly, U.P. during the period 01 August 2023 to 31 July 2024. **Result:** The LATCH scores improved significantly from 6 hours to 48 hours postpartum (p=0.001). At 6 hours, a substantial proportion of mothers scored below 8, while at 48 hours, more participants achieved higher scores, reflecting the impact of timely lactation support. These results demonstrate the utility of LATCH scoring in identifying breastfeeding challenges and guiding Help & support with the hospital policy. In our study, guiding Help & support in lactation s were provided to mothers with LATCH scores below <8 at both 6 hours and 48 hours postpartum. At 6 hours, mothers with scores <8 received targeted support, including breastfeeding education, positioning guidance, and assistance with latch techniques. **Conclusion:** The LATCH scoring system provides a practical and reliable method for evaluating and supporting breastfeeding practices.

INTRODUCTION

Exclusive breastfeeding is fundamental to child survival and health, as it delivers vital, unparalleled nutrients for a kid's growth and development.[1] It functions as a child's initial vaccination, offering protection against respiratory infections, diarrhoeal diseases, and other potentially fatal conditions. The National Family Health Survey [NHFS data from 2015-16 indicates that merely 54.9% of infants under six months in India are exclusively breastfed, with Tamil Nadu reporting a lower rate of 48.3%. In Uttar Pradesh, breastfeeding rates are much lower compared with the national aver age with EIBF at only 7% in National Family Health Survey (NFHS)-3 (2005–2006; IIPS, 2017b) and increasing to 25% in NFHS 4 (2015–2016); however, in this period, EBF rates decreased from 51% to 42%, slipping below global targets (IIPS, 2017b). To address these challenges, India has developed comprehensive infant and young child feeding programmes and policies that are well aligned with global guidance.[2] In Puducherry, the percentage is even more diminished, at only 45.5% of infants under six months receiving exclusive breastfeeding.[3] The Global Nutrition Targets 2025 seeks to elevate the rate of exclusive breastfeeding during the first six months to a minimum of 50%. Countries that have achieved or are approaching 50% exclusive breastfeeding rates should persist in their efforts to enhance these rates due to the associated health and economic advantages. The recommendation is a minimum annual rise of 1.2% or greater.[4]

As per the NHFS 4 [National Family Health Survey] data from 2015–16, hardly 54.9% of infants in India under six months of age are exclusively breastfed. EBF is one of the primary tactics acknowledged as one of the best ways to prevent early childhood death. Annually, proper breastfeeding techniques can avert

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around 1.4 million fatalities globally among children under the age of five.[5]

Recent decades have seen the development of various lactation screening instruments, including the BREAST Feed Observation Form, Lactation Assessment Tool, LATCH Scoring System, Mother-Baby Assessment Tool, and Mother-Infant Breastfeeding Progress Tool.[6]

The LATCH score is structured within a Charting System analogous to the Apgar scoring grid, facilitating documentation and serving as a systematic communication tool among specialists. The clear readability enables nurses to swiftly identify items for intervention, thereby significantly enhancing successful breastfeeding practices and facilitating the early detection of breastfeeding-related challenges, which aids in efforts to decrease early weaning rates. The LATCH approach allots a score [0, 1, or 2] to five essential components of breastfeeding, yielding a total score of 10 points.[7] Low LATCH scores signify the necessity for prompt professional involvement, assistance, and post-discharge monitoring. The utilisation of the equipment is crucial and has demonstrated a favourable link with the length of feeding. The LATCH test demonstrates substantial concordance among evaluators and a notable association between the mothers and nurses rating, therefore establishing its reliability and objectivity in evaluating breastfeeding techniques from a clinical perspective.[8] We have devised a study aimed at predicting exclusive breastfeeding in mothers during the first six months, allowing for early intervention in addressing potential issues.[9]

MATERIALS AND METHODS

This cross-sectional study was conducted after clearance from Board of Studies and Ethical committee in the Department of Paediatrics, Rohilkhand Medical college and Hospital, Bareilly, U.P. during the period 01 August 2023 to 31 July 2024.

Sample Size

P = Proportion of cases detected at 6 months postpartum.7

q = 100-p

I = absolute error [5%] N =4pq/l2

= 4*92*[100-92]/25

= 118

Sampling Technique: Simple random sampling method was used to include the sample in the study

Inclusion Criteria

- All mother who delivered at ≥34 week & had physiologicaly stable babies.
- Patients attendant who gave informed and written consent

Exclusion Criteria

- Sick babies.
- Babies with absolute contraindication for Breastfeeding.
- Babies with congenital anomalies.

Methodology

After taking clearance from Institutional Ethics Committee, Rohilkhand Medical College and Hospital, Bareilly, the study was conducted. Written informed consent was taken from parents/guardians of all the patients participating in the study in a language they can understand.

All mothers were educated and motivated about proper breastfeeding techniques, before initiation of first feed within 1 hour of life both in spontaneous vaginal delivery as well as in babies delivered via caesarean section.

Feeding was observed and checked for all five variables of LATCH score [table-1] objectives and first recorded at 6 hours of life. Each variable given a maximum score of 2 and the score was recorded again at 48 hours.

A final LATCH score at 48 hours of more than 8, was considered a positive predictor that the baby breast feed for next 6 months. If the score in less than 8 at 48 hours, it was taken as an indicator that the mothers were having difficulty in feeding the baby and will go for early weaning. All the mothers were provided help & support as per the hospital policy and were again educated about the importance of breastfeeding. If any problems flat/ inverted nipple, sore / cracked nipple, fullness /engorgement of breast, block duct, mastitis or breast abscess, poor attachments are found, they were managed accordingly.

At 6 weeks mothers were contacted during routine immunization if they were coming for immunization or by telephone and again were contacted on telephone at 6 months to know if baby is on Exclusive Breast feeding or not.

If not, reason for early weaning was enquired and noted at 6 weeks and 6 months respectively.

Statistical Analysis: The statistical analysis was conducted using the statistical software SPSS version 25.0, after importing the data into a Microsoft Excel spreadsheet. The mean values of the groups were compared using the student t-test, while the chi-square test was used to analyse the frequency differences between the groups. A p-value below 0.05 indicates statistical significance.

RESULTS

Most mothers [72.0%] had completed high school, followed by 19.5% who were graduates and 8.5% with professional qualifications. 47.5% lived in urban areas, while 52.5% lived in rural areas. The distribution of study participants based on parity shows that 61.0% were multiparous mothers, while 39.0% were primiparous.

The distribution of study participants based on the mode of delivery indicates that 50.8% of mothers had normal vaginal deliveries, while 49.2% underwent lower segment cesarean section [LSCS].

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Table 1: Distribution of Study Subjects as Per Observation by LATCH Score At 6 Hours

LATCH score at 6 hours	Number	%
<8	70	59.3
≥8	48	40.7
Total	118	100.0

At 6 hours, a higher proportion of mothers fell into lower LATCH score categories <8 in 59.3% of cases, indicating potential breastfeeding challenges, with 48 participants scoring ≥8 in 40.7% of cases.

Table 2: Distribution of Study Subjects as Per Observation by LATCH Score At 48 Hours.

LATCH Score at 48 hours	Number	%
<8	45	38.1
≥8	73	61.9
Total	118	100.0

At 48 hours, a higher proportion of mothers fell into lower LATCH score categories <8 in 38.1% of cases, indicating potential breastfeeding challenges, with 63 participants scoring ≥8 in 61.9% of cases.

Table 3: Distribution of Study Subjects as Per Observation by LATCH Score and Help and Support Privded as Per Hospital Policy, Status At 6 Hours And 48 Hours.

Support	Help & Support Privded as per Hospital Policy at 6 hours		Help & Support Privded as per Hospital Policy at 48 hours		
	Number	%	Number	%	P-VALUE
YES	45	38.1	26	22.0	
NO	73	61.9	92	78.0	
TOTAL	118	100	118	100.0	0.001*

Among mothers with LATCH scores of <8 at 6 hours, all received support, and their outcomes improved to scores of ≥8. Conversely, mothers with scores of ≥8 and higher [≥9 or 10] did not receive support as their breastfeeding practices were deemed satisfactory. The findings demonstrate that targeted support are highly effective in improving LATCH scores among mothers struggling with breastfeeding in the early postpartum period. Mothers with LATCH scores below <8 at 6 hours postpartum benefited significantly from tailored support, achieving improved outcomes.

Table 4: Distribution of Study Subjects as Per Observation by LATCH Score and Help and Support as Per Hospital Policy, Status At 48 Hours and At the Time of Discharge.

Support	Help & Support Privded as per Hospital Policy at 48 hours		Help & Support Privded as per Hospital Policy at the time of discharge		
	Number	%	Number	%	P-VALUE
YES	26	22.0	17	14.4	
NO	92	78.0	101	85.6	
TOTAL	118	100.0	118	100.0	0.001*

Mothers with LATCH scores of <8 at 48 hours received support as per hospital policy, and all showed improvements to scores of ≥8, indicating successful breastfeeding progress. In contrast, mothers scoring ≥8 and higher did not require Help & Support, as their breastfeeding practices were already satisfactory. These findings highlight the critical role of timely lactation support in addressing breastfeeding difficulties, especially for mothers with lower LATCH scores.

78.0% of mothers practiced breastfeeding, while 22.0% did not. Among those who breastfed, the majority had a professional degree [80.0%], followed by graduates [69.6%] and high school education [60.0%], Similarly, among those who did not breastfeed, 40.0% were high school- educated, 30.4% were graduates, and 20.0% were professionals. (p-value =0.001)

In our study, around 60% of multipara mothers had a LATCH score ≥8.

The comparison of LATCH scores at 48 hours between primiparous [Primi] and multiparous [Multi] mothers' highlights differences in breastfeeding practices over time. Among primiparous mothers, 69.6% scored <8 in comparison, 18.1% of multiparous mothers scored <8, while higher proportions achieved scores ≥8 [81.9%]. The p-value [0.001] indicates a statistically significant difference in LATCH scores between the primi & multi para at 48 hours postpartum.

The comparison of LATCH scores at 6 hours between mothers who delivered via lower segment cesarean section [LSCS] and those with vaginal delivery [VD] shows differences in breastfeeding effectiveness. Among mothers who underwent LSCS, 69.6% scored <8. Similarly, among mothers who had a vaginal delivery, 52.8% scored <8. The p-value [0.013] indicates a statistically significant difference in LATCH scores at 6 hours based on the mode of delivery.

Among LSCS mothers, 47.8% scored <8. Likewise, among VD mothers, 31.9% scored <8. Slightly more VD mothers scored >8 compared to LSCS mothers The p-value [0.020] indicates a statistically significant difference in LATCH scores at 48 hours based on the mode of delivery.

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Table 5: Distribution of Study Subjects as Per Time of One-Hour Feed.

1 hr. Feed	Frequency	Percentage	P-Value
Yes	82	69.5	0.001*
No	36	30.5	
TOTAL	118	100	

69.5% of mothers commenced breastfeeding within one hour, while 30.5% did not. The significant p-value [0.001] indicates a strong association between early breastfeeding initiation and study parameters, such as breastfeeding practices or LATCH scores.

The distribution of study subjects based on breast conditions reveals that 5.1% of mothers experienced flat nipples, 8.5% had inverted nipples, and 0.8% had sore nipples. Breast engorgement was reported by 3.4% of mothers, while no cases of mastitis, cracked nipples, or blocked nipples were observed.

At 6 weeks, the most common reason was being a working mother [8.5%], followed by inadequate milk secretion [5.1%], lack of knowledge [4.2%], and maternal health problems [2.5%]. By 6 months, the proportion of working mothers not breastfeeding increased significantly to 16.9%, while inadequate milk secretion also rose to 13.6%. Similarly, lack of knowledge increased to 6.8%, and maternal health problems to 5.1%.

Table 6: Distribution of Study Subjects as Per Breastfeeding Practice

Exclusive Breastfeeding	Time		P-Value
	At 6 weeks	At 6 Months	
Yes	94 [79.7]	68 [57.6]	0.001*
No	24 [20.3]	50 [42.4]	
TOTAL	118 [100.0]		

In our study out of 118 cases of Exclusive Breast Feeding at 6 weeks in 94[71.4%] of cases and at 6 months in 68[57.6%] of cases. The distribution of reasons for not breastfeeding at 6 weeks and 6 months reveals notable trends and changes over time. At 6 weeks, the most common reason was being a working mother [8.5%], followed by inadequate milk secretion [5.1%], lack of knowledge [4.2%], and maternal health problems [2.5%]. By 6 months, the proportion of working mothers not breastfeeding increased significantly to 16.9%, while inadequate milk secretion also rose to 13.6%. Similarly, the lack of knowledge increased to 6.8%, and maternal health problems increased to 5.1%. There was a significant difference in Exclusive Breastfeeding at 6 weeks.

In our study out of 118 cases of Exclusive Breast Feeding at 6 weeks in 94[71.4%] of cases and out of 94 cases 82[87.2%] of cases the LATCH score was ≥8. The distribution of reasons for not breastfeeding at 6 weeks reveals notable trends and changes over time. At 6 weeks, the most common reason was lack of knowledge, which is indicated in 12.8% of cases in which the LATCH score was <8. There was a significant difference in Exclusive Breastfeeding at 6 weeks.

In our study out of 118 cases of Exclusive Breast Feeding at 6 months in 68[57.6%] of cases and out of 68 cases 61[89.7%] of cases the LATCH score was ≥8. The distribution of reasons for not breastfeeding at 6 months reveals notable trends and changes over time. At 6 months, the most common reason was lack of knowledge, which is indicated in 10.3% of cases in which the LATCH score was <8. There was a significant difference in Exclusive Breastfeeding at 6 months.

DISCUSSION

A significant proportion of participants had a moderate level of education, which may influence their breastfeeding practices. Keerti et al,[10] [2024] observed that good LATCH scores were more prevalent among rural mothers and those with higher education levels, with a majority [81%] transitioning from poor or moderate to good LATCH scores following breastfeeding support interventions. Similarly, Ayfer et al,[11] [2024] identified maternal education as one of the top predictors of exclusive breastfeeding at six months, noting that higher educational levels contributed to improved breastfeeding success through increased awareness and confidence.

The higher prevalence of multiparous mothers aligns with the established understanding that prior experience often positively influences breastfeeding practices. Karthika et al,[3] [2019] reported similar findings, where multiparous mothers exhibited better breastfeeding outcomes, with 62.2% achieving a LATCH score of >8 at 48 hours compared to 31.1% of primiparous mothers. These results suggest that experience plays a significant role in improving breastfeeding effectiveness and confidence.

The comparison of LATCH scores at 48 hours between primiparous [Primi] and multiparous [Multi] mothers highlights differences in breastfeeding practices over time. Among primiparous mothers, 47.8% scored <8 in comparison, 4.2% of multiparous mothers scored <8, while higher proportions achieved scores ≥8 [95.8%]. The p-value [0.001] indicates a statistically significant difference in LATCH scores between the Primi & multipara at 48 hours postpartum.

This divergence from other findings might be attributed to the consistent breastfeeding support provided to all mothers in our study, which may have helped mitigate disparities between the primi & multipara.

The comparison of LATCH scores at 6 hours between mothers who delivered via lower segment

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cesarean section [LSCS] and those with vaginal delivery [VD] shows minimal differences in breastfeeding effectiveness. Among mothers who underwent LSCS, 47.8% scored <8. Similarly, among mothers who had a vaginal delivery, 4.2% scored <8. The p- value [0.001] indicates a statistically significant difference in LATCH scores at 6 hours based on the mode of delivery.

The comparison of LATCH scores at 48 hours between mothers who delivered via lower segment cesarean section [LSCS] and those with vaginal delivery [VD] reveals similar breastfeeding outcomes.

Previous studies have demonstrated varying results regarding the impact of mode of delivery on breastfeeding practices. Vernekar et al,[12] [2022] observed that the median LATCH score at 48 hours was significantly higher among mothers who delivered vaginally [median score of 7 compared to those who had LSCS deliveries [median score of 6.5, p<0.0001].

In our study, there was a significant improvement in LATCH scores from 6 hours to 48 hours postpartum [p=0.004]. At 6 hours, a substantial proportion of mothers scored below 8, indicating potential breastfeeding challenges. By 48 hours, more participants achieved higher scores, highlighting the positive impact of timely lactation support on breastfeeding practices.

Halgar et al,[10] [2024] demonstrated that breastfeeding interventions improved mean LATCH scores from 5.83±1.64 within 24 hours postpartum to 9.31±1.5 at 48 hours.

Vernekar et al,[12] [2022] emphasized that mothers with lower LATCH scores benefited significantly from targeted support, with median LATCH scores increasing from 6 to 7 by 48 hours postpartum.

At 6 weeks, the most common reason was being a working mother [8.5%], followed by inadequate milk secretion [5.1%], lack of knowledge [4.2%], and maternal health problems [2.5%]. By 6 months, the proportion of working mothers not breastfeeding increased significantly to 16.9%, while inadequate milk secretion also rose to 13.6%. Similarly, lack of knowledge increased to 6.8%, and maternal health problems to 5.1%.

This reduction in EBF highlights the challenges faced by mothers in sustaining breastfeeding over the recommended six-month period. Key barriers identified included maternal employment, inadequate milk supply, and lack of knowledge, underscoring the multifaceted nature of breastfeeding challenges. Similar trends have been reported in previous studies. Puapornpong et al,[13] [2016] observed a decline in EBF rates from 81.4% on postpartum day 2 to 31.3% by 6 months. This reduction was attributed to factors such as returning to work and maternal perception of insufficient milk supply, findings that closely mirror our study.

CONCLUSION

A substantial improvement in LATCH scores between 6 and 48 hours postpartum, reflecting the effectiveness of early lactation support. Despite high initial rates of EBF at 6 weeks, there was a notable decline by 6 months, driven by factors such as maternal employment, inadequate milk secretion, and lack of knowledge. Maternal education and parity showed significant associations with breastfeeding practices, emphasizing the need for targeted education and support for specific groups, such as primiparous mothers and less-educated women. The study also highlights barriers to breastfeeding, including breast conditions like flat and inverted nipples, which require early identification and management. Additionally, the significant association between early initiation of breastfeeding within one hour and improved outcomes reinforces the importance of timely breastfeeding practices. The LATCH scoring system provides a practical and reliable method for evaluating and supporting breastfeeding practices. Comprehensive strategies, including education, workplace accommodations, and support, are essential to sustain EBF and address the multifaceted challenges faced by mothers.

REFERENCES

1. Rapheal SM, Rajaiah B, Karupanan R, Abiramalatha T, Ramakrishnan S. LATCH Score for Identification and Correction of Breastfeeding Problems — A Prospective Observational Study. Indian Pediatrics. 2022;60(1):37–40.
2. Melissa F. Young, Phuong Nguyen, Shivani Kachwaha, Lan Tran Mai, et al.,Year: 2020 Container: Maternal & Child Nutrition Volume: 16 Issue:2
3. S. Karthika, M.Mathivanan, K.Maheswari, P.Hiremath, Devi Jesintha. A study on role of LATCH scoring in duration of exclusive breastfeeding in a rural tertiary care hospital, Puducherry: a prospective study. International Journal of Contemporary Pediatrics [Internet]. 2019 Dec 24 [cited 2021;7(1):198.
4. WHO and UNICEF. (2014). Global Nutrition Targets 2025:
5. Gupta A, Suri S, Dadhich JP, Trejos M, Nalubanga B. The World Breastfeeding Trends Initiative: Implementation of the Global Strategy for Infant and Young Child Feeding in 84 countries. Journal of Public Health Policy. 2018;40(1):35–65.
6. Elizabeth KE. Vitamins, minerals and micronutrients. In: Elizabeth KE (Ed). Nutrition and Child Development, 5th Ed. Hyderabad: Paras Medical Publisher; 2015:98-120.
7. 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.
8. Jensen D, Wallace S, Kelsay P. LATCH: a breastfeeding charting system and documentation tool. J Obstet Gynecol Neonatal Nurs. 1994;23(1):27-32.
9. Jensen D, Wallace S, Kelsay P. LATCH: A Breastfeeding charting system and documentation Tool. Journal of Obstetric, Gynecologic & Neonatal Nursing. 1994;23(1):27–32.
10. Keerti, Halgar., Roopa, B., Mangshetty., A., B., Apurva. LATCH score: a tool for identification and correction of breastfeeding problems in a tertiary care hospital of North Karnataka. International Journal of Contemporary Pediatrics, (2024).;11(3):272-276.
11. Ayfer, Açikgöz., Merve, Cakirli., Berrak, Mizrak, Sahin et.al. Predicting mothers' exclusive breastfeeding for the first 6 months: Interface creation study using machine learning technique.. Journal of Evaluation in Clinical Practice, (2024).

ISSN (O): 2687-5365; ISSN (P): 2753-6556

12. Poonam, Vernekar., Manisha, Bhandankar., Pooja, Hiremath. Low Latch Score: A Red Flag Sign and an Educational Tool for Intervention Among Mothers to Promote Exclusive Breastfeeding. Journal of Neonatology, (2022).;37(2):142-148.

13. Pawin, Puapornpong., Kasem, Raungrongmorakot., Suttha, Hamontri, et al., Latch score and exclusive breastfeeding during the first six months postpartum. (2016).;23(1):8-14.

ISSN (O): 2687-5365; ISSN (P): 2753-6556