



LATCH Score for Identification and Rectification of Breastfeeding Complications - A Prospective Observational Study

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Abstract

Breastfeeding is one of the smartest investments to improve human capital, stimulate economic growth and give every child the same opportunity to survive and thrive. Exclusive breastfeeding is a cornerstone of child survival and child's health because it provides essential, irreplaceable nutrition for a child's growth and development. A study was conducted to determine early breastfeeding problems using LATCH tool and analyse the impact of breastfeeding supportive measures in improving LATCH score. LATCH is a comprehensive yet simple tool to identify breastfeeding problems. Given the high incidence of breastfeeding problems during early postpartum period, systematic assessment of breastfeeding related problems using LATCH tool can help timely intervention and improvement in the breastfeeding technique.

Keywords: Breastfeeding, Mother, LATCH

1. Introduction:

"It is Judgement time.

The milk flow is of smaller amount.

The baby is not latching appropriately.

The nipples stand either too large or too small."

A postpartum mother's mind is instantly overrun by a variety of issues. A newborn baby's first 1,000 days is very vital in the life of a newborn. Exclusive breastfeeding is the essential cornerstone for the child's survival. It is the first vaccination that offers defense against respiratory infections, diarrheal illnesses, and other potentially fatal diseases. A woman's BF habits may be influenced by her obstetrics experience. Effective BF can only begin with good obstetric procedures during labour. "The Infant has just three needs. They are security in knowing that their mother is there, warmth in her arms, and sustenance from her breasts. All three are satisfied by Breastfeeding. The present study helps to assess and identify breastfeeding complications using LATCH Score. Breastfeeding is widely acknowledged as a significant intervention in efforts to mitigate death rates of new babies and kid's under-5 (Sankar et al., 2015). While nursing is a physiological process, certain mother-infant pairs may have challenges in establishing successful breastfeeding, particularly in the early postpartum period (Feenstra et al., 2018). The available evidence indicates that commencing breastfeeding early and exclusively breastfeeding upon leaving the hospital are linked to higher rates of exclusive breastfeeding until the infant reaches six months of age and a longer overall duration of breastfeeding (van Dellen et al., 2019). It is very important for the well-being of the child as well as mother to adopt right breastfeeding practises.

Therefore, it is imperative to evaluate breastfeeding practises, provide instruction on proper breastfeeding procedures, and enhance maternal confidence in breastfeeding. There exists a necessity for the implementation of a structured methodology to assess the efficacy of breastfeeding, detect any issues pertaining to breastfeeding, and promptly implement suitable remedial measures.

2. Materials and Methods

The present investigation was carried out in tertiary care hospitals in Maharashtra between April 2022 and December 2022, encompassing all new born babies. The neonates who needed admission to the neonatal intensive care unit, multiple deliveries, and moms who were ill and unable to have their LATCH score tested within the designated time frame were excluded from the study. LATCH is a Breastfeeding charting technique that offers a systematic approach for learning about Breast feeding sessions by evaluating the essential elements. The area of assessment known as LATCH assigns a numerical score of 0, 1, 2, or 5 to important Breastfeeding components.





The approach uses a visual representation and numerical treatment that are identical to those of the Apgar scoring grid. The nurse can evaluate Maternal and new-born factors, identify problem areas, and prioritize treatment and education with the use of the LATCH system. The term LATCH is an acronym that represents the following components: latch, audible swallowing, kind of nipple, comfort, and hold (Fadiloglu et al., 2021). The scoring of each component runs from 0 to 2, resulting in a total score ranging from 0 to 10. A score below 8 is said to be low and unacceptable. The LATCH score was evaluated during four different time frame of 0-8 hours, 8-16 hours, 16-24 hours and 24-48 hours following delivery.

Table 1: LATCH Score assessment tool

	0	1	2	Score
L Latch	Too sleepy No sustained latch or suck	Repeated attempts for latch or suck Hold nipple in mouth	Grasps breast Tongue down Lips flanged Rhythmical sucking	
A Audible swallowing	None	A few with stimulation	Spontaneous and intermittent (<24 hrs)	
T Type of nipple	Inverted	Flat	Everted (after stimulation)	
C Comfort	Engorged Cracked, bleeding, large blisters, or bruises	Filling Reddened, small blisters or bruises	Soft Non-tender	
H Hold	Full assist (staff holds infant at breast)	Minimal assist (staff holds, then mother takes over)	No assist from staff Mother able to position and hold infant	
TOTAL:				

Demographic and clinical information pertaining to both the mother and the baby were gathered using a pretested research form. The study included a sample size of 350 mother-infant dyads with 175 mother/infant dyads with Natural conception and 175 mother/infant dyads with Assisted Reproduction techniques (ART).

Section is dedicated to reveal the nature of distribution of LATCH scores in 0-8 hours, 8-16 hours, 16-24 hours and 24-48 hours as well as of knowledge of mothers regarding breast feeding practices. The LATCH score is an assessment tool used in the field of lactation consulting and neonatal care to evaluate Breastfeeding success and identify any potential issues that may be hindering a newborn ability to latch onto the breast effectively.

3. Data analysis and results:

(a) To study the LATCH score of moms of neonates in 0-8 hours of birth of child, the frequency distribution was employed as shown in table 2(a).

Table 2 (a) : Frequency Distribution of LATCH score in 0-8 hours of moms of neonates (N=350)

Class Interval		Frequency	%		
0-2		68	19.4		
2-4		118	33.7		
4-6		120	34.3		
6-8		44	12.6		
Mean	Median	SD	Skewness	Kurtosis	
3.28	3.00	1.89	-0.076	-0.840	

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Table 2(a) shows that majority of the mother/Infant dyads in 0-8 hours of birth had LATCH score below 6 (N=306 and 87.4%) whereas 12.6% mother/Infant dyads had LATCH score BTW 6-8. The mean LATCH score of the mother/Infant dyads is 3.28 with median of 3.00. The value of SD is 1.89.

The value of Skewness is -0.076 indicating the distribution is negatively skewed. The value of kurtosis is -0.840 showing the distribution as Platykurtic. The range of LATCH score of the mother/Infant dyads is 7 with minimum score as 0 and maximum score as 7. This indicates that the moms of neonates have poor LATCH score in 0-8 hours of birth of child.

- (b) To study the LATCH score of moms of neonates in 8-16 hours of birth of child, the frequency distribution was employed as shown in table 2(b).

Table 2 (b): Frequency distribution of LATCH score in 8-16 hours of moms of neonates (N=350)

Class Interval		Frequency	Percent		
0-2		0	0		
2-4		50	14.3		
4-6		136	38.9		
6-8		161	46.0		
8-10		3	0.9		
Mean	Median	SD	Skewness	Kurtosis	
5.17	5.00	1.42	-0.493	-0.341	

Table 2(b) shows that half of the mother/IF dyads in 8-16 hours of birth had LATCH score below 6 (N=186 and 51.1%) whereas 46.9% mother/IF dyads had LATCH score BTW 6-9. The mean LATCH score of the mother/IF dyads is 5.17 with median of 5.00. The value of SD is 1.42. The value of Skewness is -0.493 indicating the DTB is negatively skewed. The value of kurtosis of DTB is -0.341 showing DTB as Platykurtic. The range of LATCH score of the mother/IF dyads is 7 with minimum score as 2 and maximum score as 9. This indicates that the LATCH score in 8-16 hours of birth of child improved from the LATCH score in 0-8 hours of birth of child.

- (c) To study the LATCH score of moms of neonates in 16-24 hours of birth of child, the frequency DTB was employed as shown in table 3.

Table 2 (c) Frequency DTB of LATCH score in 16-24 hours of moms of neonates (N=350)

Class Interval		Frequency	Percent		
0-2		0	0		
2-4		0	0		
4-6		40	11.4		
6-8		192	54.9		
8-10		106	30.3		
10-12		12	3.4		
Mean	Median	SD	Skewness	Kurtosis	
7.05	7.00	1.28	0.248	-0.419	

Table 2 (c) shows that very small proportion of the mother/Infant dyads in 16-24 hours of birth had LATCH score below 6 (N=40 and 11.4%), 54.9% mother/Infant dyads had LATCH score in the range of 6-8 whereas 33.7% mother/ dyads had LATCH score BTW 8-10. The mean LATCH score of the mother/IF dyads is 7.05 with median of 7.00.

The value of SD is 1.28. The value of Skewness is 0.248 indicating the DTB is positively skewed. The value of kurtosis of DTB is -0.419 showing DTB as Platykurtic. The range of LATCH score of the mother/IF dyads is 6 with minimum score as 4 and maximum score as 10. This indicates that the LATCH score in 16-24 hours of birth of child improved over the LATCH score in 8-16 hours of birth of child.

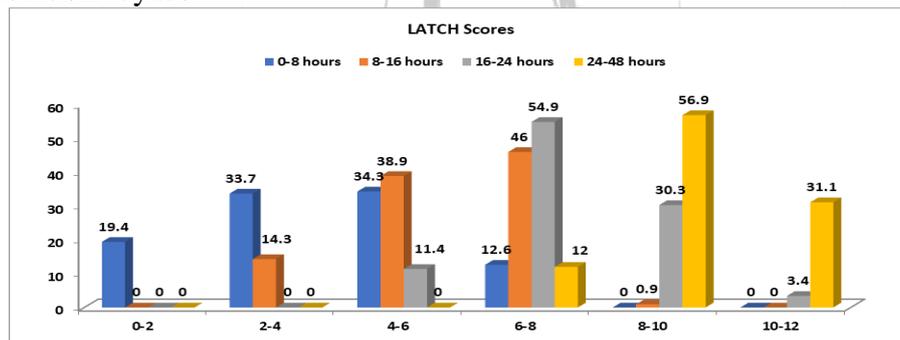
- (d) To study the LATCH score of moms of neonates in 24-48 hours of birth of child, the frequency distribution was employed as shown in table 3(d).



**Table 2 (d): Frequency Distribution of LATCH score in 24-48 hours of moms of neonates (N=350)**

Class Interval		Frequency	%		
0-2		0	0		
2-4		0	0		
4-6		0	0		
6-8		42	12.0		
8-10		199	56.9		
10-12		109	31.1		
Mean	Median	SD	Skewness	Kurtosis	
8.75	9.00	1.09	-0.532	-0.418	

Table 2(d) shows that more than half of the mother/IF dyads in 24-48 hours of birth had LATCH score BTW 6-9 (N=241 and 68.9%) whereas 31.1% mother/IF dyads had LATCH score of 10. The mean LATCH score of the mother/IF dyads is 8.75 with median of 9.00. The value of SD is 1.09. The value of Skewness is -0.532 indicating the DTB is negatively skewed. The value of kurtosis is -0.418 showing DTB as Platykurtic. The range of LATCH score of the mother/IF dyads is 4 with minimum score as 6 and maximum score as 10. This indicates that the LATCH score in 24-48 hours of birth of child improved from the LATCH score in 8-16 hours of birth of child and most of the mother/IF dyads reached at the level of perfect breastfeeding. Figure 1 shows the LATCH scores of mother/IF dyads in 0-8 hours, 8-16 hours, 16-24 hours, and 24-48 hours which clearly indicates the improvement in LATCH scores of mother/IF dyads.

**Fig. 1: LATCH scores of mother/IF dyads in 0-8 hours, 8-16 hours, 16-24 hours, and 24-48 hours**

- (e) To study the Knowledge of moms regarding breastfeeding practices, the frequency distribution was employed as shown in table 2(e).

Table 2(e) : Frequency distribution of Knowledge of moms regarding breast FD PC (N=350)

Class Interval	Frequency	%
1-3	55	15.7
4-6	96	27.4
7-9	84	24.0
10-12	75	21.4
13-15	40	11.4

(b)

Mean	Median	SD	Skewness	Kurtosis
7.53	7.00	3.77	0.161	-0.879

Table 2(e) shows that 43.1% moms were found to have poor Knowledge regarding breast Feeding practices whereas only 11.4% moms were found to have good knowledge. The mean score of the KL of moms regarding breast FD PC is 7.53 with median of 7.00. The value of SD is 3.77. The value of Skewness is 0.161 indicating the DTB is positively skewed. The value of kurtosis of DTB is -0.879 showing DTB as Platykurtic. The range of KL score of moms regarding breast FD PC is 14 with minimum score as 1 and maximum score as 15.



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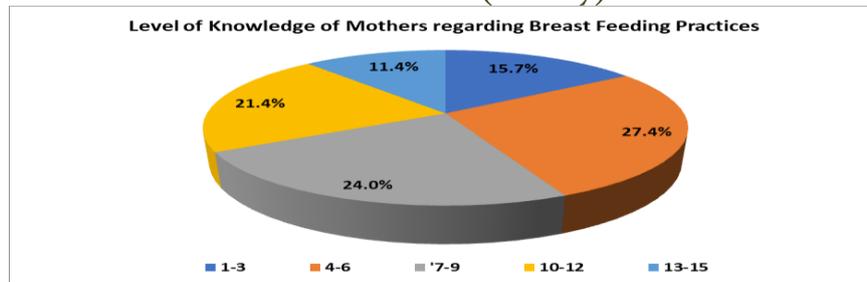


Fig. 2: shows the Knowledge of moms regarding breastfeeding practices

4. Discussion

On the second postpartum day before being discharged in Thailand et al. (2016) conducted a study to compare the LATCH scores of 1316 moms with LSCS and those with normal deliveries. According to the findings, the mean LATCH scores were 7.9 +/- 1.7 in the LSCS group and 8.1 +/- 1.3 in the group of women who had normal deliveries. The adjusted LATCH odd ratio of LATCH scores larger than 8 between women who had caesarean sections and women who had normal deliveries was 0.8.

To ascertain whether LATCH scores were a reliable indicator of exclusive BF at 6 weeks among 248 postpartum moms, Kumar PS, et al. (2006) undertook a prospective study. After being released, the women were contacted by phone on days 4 and 6 to check on their nursing progress. The question of whether it was exclusive, partial, or token was posed if the response was yes. The results showed that the LATCH score predicts the length of Breastfeeding and that a low LATCH score indicates that aggressive intervention from healthcare professionals is required to encourage exclusive Breastfeeding.

There was a significant improvement in nipple problems such as flat or inverted nipples by 24 hours after delivery with simple interventions such as tactile stimulation or nipple puller. The 'comfort' component had good scores at both 6-12 and 24-48 hours post-delivery, probably because problems causing discomfort while breastfeeding, such as breast engorgement or sore/cracked nipples usually develop later during the postpartum period. 'Audible swallowing' component scored low at both assessments and this is probably due to the less quantity of milk secreted by mothers on day 1 and 2 after delivery.

5. Conclusion:

Our study showed that almost all the mothers required assistance in positioning the neonate during breastfeeding and almost half of mother-infant dyads had problems related to latching, with 13% mothers having nipple issues soon after delivery. We found a significant reduction in breastfeeding problems with timely support, training and counselling of mothers.

LATCH score provides a systematic method to evaluate five key components of the breastfeeding technique. It helps to identify the nature of the problem, so that appropriate corrective measures can be taken by counselling and training the mothers with simple visual aids. Improper latching and positioning of the neonate during breastfeeding may result in the baby sucking only on the nipple, which in turn will lead to inadequate feeds to the neonate and sore/cracked nipples and breast engorgement in the mother. The LATCH score of mother/infant dyads with both natural conception and with assisted reproduction techniques (ART) improved from birth to 48 hours subsequently.

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