LATCH as a systematic tool for assessment of the breastfeeding technique in maternity

LATCH como ferramenta sistematizada para avaliação da técnica de amamentação na maternidade

LATCH como herramienta sistematizada para evaluar la técnica de lactancia en la maternidad

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Abstract

Objective: To analyze women's difficulties related to the breastfeeding technique according to the LATCH tool and assess the relationships with sociodemographic, obstetric and neonatal characteristics.

Methods: Cross-sectional analytical study with women in a single birth and their children in exclusive breastfeeding between June and December 2015. The individual and total scores of the LATCH tool were used to assess the breastfeeding technique, considering women's difficulties to breastfeed and the child's hours of life. Chi-square, Fisher's exact, Kruskal-Wallis tests, and a generalized linear model were used to assess the relationships between LATCH scores and sociodemographic, clinical, and obstetric characteristics.

Results: Among the 162 mother-child pairs analyzed, children over 48 hours of life presented less difficulties in relation to latching (p=0.002), audible swallowing (p<0.001) and positioning (p<0.001). In the comfort item, women with infants <24 hours of life had less painful (p=0.004). The LATCH score was lower for women with previous breast surgery (p=0.005), with premature children (p=0.011) weighing less than 2,500 grams (p=0.006) and aged <24 hours of life.

Conclusion: The LATCH tool was useful in analyzing women's difficulties with the breastfeeding technique during the hospitalization phase, considering the characteristics of the woman and the child.

Resumo

Objetivo: Analisar as dificuldades das mulheres relacionadas à técnica de amamentação, segundo a escala LATCH e verificar relações com as características sociodemográficas, obstétricas e neonatais.

Métodos: Estudo analítico transversal com mulheres e respectivos filhos únicos em aleitamento materno exclusivo entre junho e dezembro de 2015. Os escores individuais e total da escala LATCH foram usados para avaliar a técnica de amamentação, considerando-se as dificuldades das mulheres para amamentar e as horas de vida da criança. Os testes Qui-quadrado, exato de Fisher, Kruskal-Wallis e um modelo linear generalizado foram usados para avaliar as relações entre os escores da LATCH e as características sociodemográficas, clínicas e obstétricas.

Resultados: Dentre as 162 duplas mãe-filho analisadas, as crianças com mais 48 horas de vida apresentaram menos dificuldades em relação à pega (p=0,002), à deglutição audível (p<0,001) e ao posicionamento (p<0,001). No item conforto, as puérperas com filhos com <24 horas de vida apresentaram menos dor (p=0,004). O LATCH foi menor para as mulheres com cirurgia mamária prévia (p=0,005), com filhos prematuros (p=0,011), peso menor de 2.500 gramas (p=0,006) e com <24 horas de vida.

Conclusão: O uso do LATCH foi útil na análise das dificuldades da técnica de amamentação das mulheres durante a fase da internação, considerando as características da mulher e da criança.

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Resumen

Objetivo: Analizar las dificultades de las mujeres relacionadas con la técnica de lactancia, de acuerdo con la escala LATCH y verificar relaciones con características sociodemográficas, obstétricas y neonatales.

Métodos: Estudio analítico transversal con mujeres y sus respectivos hijos únicos en lactancia materna exclusiva entre julio y diciembre de 2015. La puntuación individual y total de la escala LATCH fue utilizada para evaluar la técnica de lactancia, considerando las dificultades de las mujeres para amamantar y las horas de vida del bebé. Para evaluar las relaciones entre la puntuación de LATCH y las características sociodemográficas, clínicas y obstétricas, se utilizó la prueba χ^2 de Pearson, la prueba exacta de Fisher, la prueba de Kruskal-Wallis y un modelo lineal generalizado.

Resultados: Entre los 162 binomios madre e hijo analizados, los niños con más de 48 horas de vida presentaron menos dificultades con relación a la prendida (p=0,002), a la deglución audible (p<0,001) y a la colocación (p<0,001). En el área comodidad, las puérperas con hijos de <24 horas de vida presentaron menor dolor (p=0,004). La puntuación LATCH fue menor en mujeres con cirugía mamaria previa (p=0,005), con hijos prematuros (p=0,011), peso inferior a 2500 gramos (p=0,006) y con <24 horas de vida.

Conclusión: El uso de la escala LATCH fue útil para analizar las dificultades de la técnica de lactancia de mujeres durante la fase de internación, considerando las características de la mujer y del niño.

Introduction

The use of a breastfeeding assessment tool improves health professional practice as it systematizes and records its performance, facilitates the proposal of individualized behaviors for the mother and her child, and qualifies the written communication between professionals, which offers continuity for interventions.[1]

The LATCH assessment tool is one of the most used in clinical practice.[1] It was developed with the purpose of helping health professionals in the assessment of breastfeeding techniques and identifying situations in which intervention is necessary for improvement of care for the mother-baby pair.[2]

The LATCH score is designed in a Charting System that represented in the same from as the Apgar scoring grid, it will be easy to document and use as a systematic communication between professionals.[2] The easy to read at a glance allows nurses' quick identification of items for their intervention, significantly contributes for the successful breastfeeding practice and early detection of breastfeeding-related difficulties, being a facilitating factor in the attempt to reduce rates of early weaning.[3]

In the LATCH system, a numerical score (0, 1 or 2) is assigned to five key components of breastfeeding for a possible total score of 10 points. The suggestion is that the quality of the baby's latch is assessed and documented twice by two health professionals within a 24-hour period.[2]

By using this tool, it is possible to predict the duration of breastfeeding within the first 24 hours of life, since there is a significant relationship between a higher score and exclusive breastfeeding.[3] Breastfeeding assessments are vital from the first feeding in the delivery room until discharge.[4] Low LATCH scores indicate the need for immediate professional intervention, support, and post-discharge follow-up.[4] The use of the tool is essential, and has shown a positive correlation with the duration of breastfeeding.[4,5] The LATCH tool shows a high degree of agreement between evaluators and a significant correlation between the assessment scores of mothers and nurses, therefore, it is reliable and objective for assessment of the breastfeeding technique from a clinical point of view.[3,6]

Its use allows the increase of maternal self-confidence in relation to their ability to breastfeed and deal with their child's needs, and constitutes a quality indicator for health institutions.[7-9] In Brazil, this tool is little known and explored in clinical practice, despite having been translated and validated in Portuguese.[10]

Therefore, the aim of this study was to analyze women's difficulties related to the breastfeeding technique according to the LATCH tool and assess the relationships with sociodemographic, obstetric and neonatal characteristics.

Methods

Cross-sectional analytical study with women and their children born in the maternity of a private tertiary-level hospital in São Paulo, Brazil. The hospital has a total of 617 beds and serves several areas. The maternity ward has 56 rooming-in beds and

an average rate of 4,000 births/year. The practice of breastfeeding in the service is encouraged immediately after birth and occurs within the first two hours at the Birth Center. Breastfeeding on demand in is encouraged in the rooming-in.

The study included women who had children at the respective service between June and December 2015. Women with an only child admitted to the maternity ward in rooming-in care and who were exclusively breastfeeding were included. Those whose children were referred to the Intermediate Care or Neonatal Intensive Care units at some time in hospitalization during the study period were excluded.

Data collection was performed by two nurses who obtained information from medical records, interviews, and observation of breastfeeding. For this purpose, a specific instrument containing the following variables was used: sociodemographic data of the woman (age, education), obstetric data (parity, type of delivery, had previous breast surgery including the type) and of the child (hours of life, gender, gestational age, Apgar at 1 and 5 minutes, birth weight and current weight).

Women's difficulties with the breastfeeding technique were assessed by means of the LATCH tool.[10] The System is used to assist professional nurses in the systematic assessment of breastfeeding regarding the type of difficulty presented by the woman and the child. The word LATCH is the English acronym for the characteristics evaluated: "L" (latch) refers to the quality of the child's latch onto the breast; "A" (audible swallowing) refers to the possibility of noting the baby's swallowing while breastfeeding; "T" (type of nipple) evaluates the nipple type; "C" (comfort) refers to the maternal complaint of breast pain and the presence of pain and/or nipple injury; "H" (hold) refers to whether or not the mother needs to hold her infant to the breast. The LATCH tool assigns a numerical score from 0 to 2 to each of the five key components of breastfeeding with a maximum score of 10 points (Chart 1).[10]

Data collection took place daily. Nurses assessed the women who were breastfeeding in the rooming-in, identified their eligibility and invited them to participate in the study. After puerperal women signed the Informed Consent form, the nurse performed the interview, followed by confirmation of data in the medical record and then observed the breastfeeding technique.

Chart 1. LATCH tool

	0	1	2	Score
L Latch	Too sleepy or reluctant No latch achieved	Repeated attempts Hold nipple in mouth Stimulate suck	Graps breast Tongue down Lips flanged Rhythmic suction	
A Audible swallowing	None	A few with stimulation	Spontaneous and intermittent <24 hours old Spontaneous and frequent >24 hours old	
T Type of nipple	Inverted	Flat	Everted (after stimulation)	
C Comfort (Breast/ nipple)	Engorged Cracked, bleeding, large blisters, or bruises. Severe discomfort.	Filling Reddened/small blisters or bruises Mild/moderate discomfort	Soft Tender	
H Hold (positioning)	Full assist (Staff holds infant at breast)	Minimal assist (i.e., elevate head of bed; place pillows for support.) Teach one side; mother does other Staff holds and then mother takes over	No assist from staff Mother able to position/hold infant	

Original Source: Jensen D, Wallace S, Kelsay P. LATCH: a breastfeeding charting system and documentation tool. J Obstet Gynecol Neonatal Nurs. 1994;23(1):27-32.[2] / Portuguese version source: Conceição CM, Coca KP, Alves MR, Almeida FA. Portuguese language validation of the LATCH breastfeeding assessment instrument.[10]

The collected data were transferred to Excel spreadsheets. Categorical variables were described by frequency, and numerical variables were presented as mean, standard deviation, minimum and maximum values. The response variables of this study were: maternal age (categorized into: <39 years and ≥40 years), parity (primiparous or multipara), type of delivery (vaginal and cesarean), previous breast surgery (presence or absence), type of breast surgery (augmentation, reduction or nodule removal), gestational age of the infant (<37 or ≥37 weeks), birth weight (<2,500 or ≥2,500 grams), Apgar at 1 minute (<7 or ≥7) and infant's hours of life (<24 hours, 24-48 hours or >48 hours). The groups of infants' hours of life were compared in relation to maternal and newborn characteristics using analysis of variance (ANOVA) models or non-parametric Kruskal-Wallis tests. Differences were located by multiple comparison tests with p values corrected by the Bonferroni method for numerical variables and chi-square or Fisher's exact tests for categorical variables.

Breastfeeding difficulties were presented and analyzed according to the infant's hours of life (<24 hours, 24-48 hours and >48 hours) in relation to individual and total scores of the LATCH tool.

The association between the child's age and the scores (individual and total) of the LATCH tool were performed using non-parametric Kruskal-Wallis tests, while the differences were located by multiple comparison tests with p values corrected by the method of Bonferroni. Associations between the infant's age and the total score of the LATCH tool using different cutoff points were investigated using chi-square or Fisher's exact tests.

Generalized linear models in a simple approach were adjusted for the response variable total score on the LATCH tool with gamma probability distribution and log link function, and the explanatory variables: sociodemographic, clinical and obstetric characteristics. Given the important relationship between the infant's hours of life at the time of collection and the total score of the LATCH tool, similar models were adjusted with the same explanatory variables, also considering the infant's hours of life at the time of collection. The results of the models were presented by estimated means for the total score and 95% confidence intervals.[11]

Data were analyzed using the SPSS software; a significance level of 5% and a confidence interval of 95% were considered. The number of feeds to be evaluated in this study was estimated with the main objective of obtaining a precision of 0.1 (10%) at a 95% confidence interval for the intraclass correlation coefficient, which was used to assess the reproducibility of the instrument. As there is no information about this coefficient applied to this scale, we anticipated the value of 0.6 so that, for a precision of 10%, the required number of breastfeeds was 158, according to the methodology proposed by Shoukri et al.[12]

Results

The study sample consisted of 162 women and their respective children. The mean age of women studied was 34 years (SD=3.8; min. 24 and max. 45), 96% had completed higher education, 52% were primiparous, 72% had cesarean delivery and 19% had a history of breast surgery (14% augmentation, 3% reduction and 2% removal of nodules). Regarding infants' data, 46% were between 24 and 48 hours of life, 55% were male, the mean gestational age identified was 39 weeks (SD=1.2, min. 34 and max. 41), 95% had Apgar score ≥7 at 1 minute and 100% had score ≥9 at 5 minutes, the average birth weight was 3,300 grams (SD=404, min. 2,185, max. 4,420) and the average weight on the day of data collection was 3,140 grams (SD=408, min 2,085, max 4,290).

The groups of infants' hours of life were compared in terms of maternal and newborn characteristics. Differences were observed in mean gestational age at birth and weight on the day of data collection, the group with less than 24 hours of life had higher mean values than the group with more than 48 hours (Table 1).

Table 1. Analysis of homogeneity of groups according to infant's hours of life and maternal and infant characteristics

Characteristics	Infant's hours of life			p-value
	< 24 hours n(%)	24 to 48 hours n(%)	> 48 hours n(%)	
Maternal				
Maternal age (years) Mean (SD)	34.0(3.4)	33.5(3.8)	34.1(4.2)	0.668*
Education - Complete higher education	42(97.7)	69(93.2)	44(97.8)	0.417**
Parity - primiparous	20(46.5)	40(54.1)	25(55.6)	0.651***
Type of delivery - cesarean	30(69.8)	52(70.3)	34(75.6)	0.924**
Previous breast surgery – no	32(74.4)	61(82.4)	38(84.4)	0.439***
Child				
GA (weeks) Mean (SD)	39.3(1.0)	38.9(1.1)	38.7(1.3)	0.027*
Apgar 1 min. ≥7	42(97.7)	69(93.2)	43(95.5)	0.286**
Apgar 5 min. ≥7	43(100)	74(100)	45(100)	0.483**
Birth weight Mean (SD)	3257.9(355.5)	3357.8(423.7)	3212.9(406.6)	0.136*
Current weight Mean (SD)	3257.9(355.5)	3228.5(412.4)	2993.9(358.4)	0.002*

GI - Gestational Age; SD - standard deviation; *Analysis of variance model; **Fischer's exact test; ***Chi-square test

As for individual scores, differences were observed between groups in latch (p=0.002), audible swallowing (p<0.001), comfort (p=0.004) and positioning (p<0.001) scores (Table 2).

Regarding difficulty with the latch, infants >48 hours of life had a higher adequacy score compared to the group of infants <24 hours of life (p=0.002).

Table 2. Individual scores of the LATCH tool according to women's difficulties (n=162) and infants' hours of life

Scores	Infant's hours of life			p-value
	<24 (n = 43) n(%)	24 - 48 (n = 74) n(%)	>48 (n = 45) n(%)	
L – Latch				0.002
0	3(7)	6(8.1)	2(4.4)	
1	18(41.9)	14(18.9)	4(8.9)	
2	22(51.2)	54(73)	39(86.7)	
A – Audible swallowing				<0.001
0	43(100)	68(91.9)	32(71.1)	
1	0(0)	4(5.4)	11(24.4)	
2	0(0)	2(2.7)	2(4.4)	
T – Type of nipple				0.062
0	1(2.3)	0(0)	0(0)	
1	1(2.3)	0(0)	0(0)	
2	41(95.3)	74(100)	45(100)	
C – Comfort (breast/nipple)				0.004
0	0(0)	0(0)	1(2.2)	
1	1(2.3)	14(18.9)	12(26.7)	
2	42(97.7)	60(81.1)	32(71.1)	
H – Hold (positioning)				<0.001
0	12(27.9)	5(6.8)	2(4.4)	
1	22(51.2)	24(32.4)	15(33.3)	
2	9(20.9)	45(60.8)	28(62.2)	

p-value - Kruskal-Wallis test

No differences were observed when comparing the other groups: <24 hours with 24-48 hours of life (p=0.070); and 24-48 hours with >48 hours (p=0.336).

Differences were also observed for audible swallowing, in which infants >48 hours had a higher positivity score compared to the group of infants <24 hours (p<0.001) and 24-48 hours (p=0.002). There was no difference when comparing the <24-hour group with the 24-48-hour group (p=0.553).

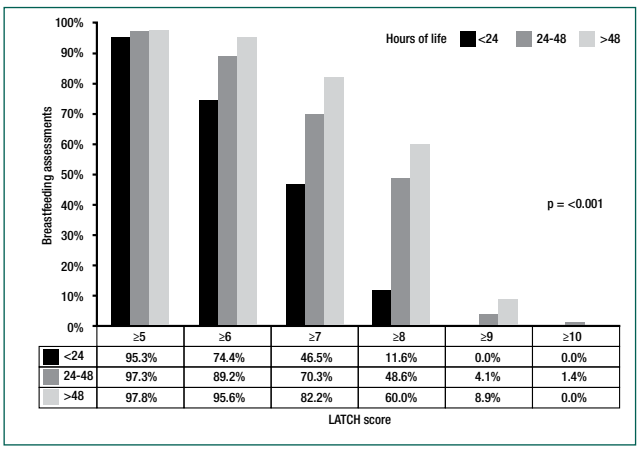
For the type of nipple, no differences were found between the groups of infants studied (p=0.062).

For comfort, differences were observed between groups, with higher scores for infants <24 hours of life compared to the group of infants >48 hours (p=0.004). No differences were observed between groups: <24 hours with 24-48 hours (p=0.070); and 24-48 hours with >48 hours (p=0.454).

For the item positioning, differences were also observed between groups regarding the score, in which infants <24 hours of life had lower scores compared to infants aged 24-48 hours (p<0.001) and those aged >48 hours (p<0.001). When comparing groups aged 24-48 hours and >48 hours (p>0.999), there was no difference.

When comparing the groups in relation to the total score, differences were identified (p<0.001), with lower scores for infants <24 hours compared to the groups of infants aged 24-48-hour (p<0.001) and >48 hours (p<0.001). No difference was observed between the 24-48 hour and >48-hour groups (p=0.359).

For the other total scores, no associations were observed. Infants >48 hours had a higher proportion of breastfeeding with scores ≥6, ≥7 and ≥8 (Figure 1).



	≥5	≥6	≥7	≥8	≥9	≥10
<24	95.3%	74.4%	46.5%	11.6%	0.0%	0.0%
24-48	97.3%	89.2%	70.3%	48.6%	4.1%	1.4%
>48	97.8%	95.6%	82.2%	60.0%	8.9%	0.0%

Figure 1. Distribution of the total score of the LATCH tool according to infants' hours of life on the day of collection

Regarding the distribution of the total score of the LATCH tool according to infants' hours of life for different cutoff points, associations were observed between the infant's hours of life and the total score ≥6 (p=0.010), ≥7 (p=0.001) and ≥8 (p<0.001) on the LATCH tool (Table 3).

The total score of the LATCH tool was lower for women with previous breast surgery (p=0.005), whose children were <37 weeks (p=0.011), with birth weight less than 2,500 grams (p=0.006) and <24 hours of life (p<0.001). The low number of women studied with breast surgery did not allow the comparison of this variable (Table 4).

A relationship between the infant's age and the total score of the LATCH tool was also observed. In infants aged 24-48 hours, multiparous women (p=0.032), with previous breast surgery (p=0.048) and mothers of preterm infants (p=0.006) had lower total score values. As for infants aged >48 hours,

Table 3. Distribution of cutoff points for the total score of the LATCH tool according to infants' hours of life (n = 162)

LATCH total score	Hours of life			p-value
	<24 (n = 43) n(%)	24-48 (n = 74) n(%)	>48 (n = 45) n(%)	
				0.725*
<5	2(4.7)	2(2.7)	1(2.2)	
≥5	41(95.3)	72(97.3)	44(97.8)	
				0.010**
<6	11(25.6)	8(10.8)	2(4.4)	
≥6	32(74.4)	66(89.2)	43(95.6)	
				0.001**
<7	23(53.5)	22(29.7)	8(17.8)	
≥7	20(46.5)	52(70.3)	37(82.2)	
				< 0.001**
<8	38(88.4)	38(51.4)	18(40.0)	
≥8	5(11.6)	36(48.6)	27(60.0)	
				0.128*
<9	43(100.0)	71(95.9)	41(91.1)	
≥9	0(0.0)	3(4.1)	4(8.9)	
				> 0.999*
<10	43(100.0)	73(98.6)	45(100.0)	
≥10	0(0.0)	1(1.4)	0(0.0)	

*Fisher's exact test; **Chi-square test

Table 4. Estimated mean values and 95% confidence intervals (95%CI) for the total score of the LATCH tool according to sociodemographic, clinical and obstetric variables

Maternal and infant variables	Mean (95% CI)	p-value
Maternal age		0.181
<40 years	6.9 (6.7; 7.1)	
≥40 years	7.6 (6.7; 8.5)	
Parity		0.184
Primiparous	7.1 (6.8; 7.4)	
Multipara	6.8 (6.6; 7.1)	
Type of delivery		0.136
Vaginal	7.2 (6.8; 7.6)	
Cesarean	6.9 (6.7; 7.1)	
Previous breast surgery		0.005
No	7.1 (6.9; 7.3)	
Yes	6.4 (6.0; 6.8)	
Infant's GA at birth		0.011
<37 weeks	6.0 (5.3; 6.8)	
≥37 weeks	7.0 (6.8; 7.2)	
Birth weight		0.006
<2.500 grams	5.6 (4.8; 6.6)	
≥2.500 grams	7.0 (6.8; 7.2)	
Apgar at 1 minute		0.270
<7	6.5 (5.7; 7.4)	
≥7	7.0 (6.8; 7.2)	
Infant's hours of life		<0.001
<24 hours	6.3 (6.0; 6.6)	
24 to 48 hours	7.1 (6.8; 7.4)	
>48 hours	7.4 (7.1; 7.8)	

Generalized linear model with gamma probability distribution and log link function. GA - Gestational age

only babies born prematurely had lower scores (p=0.014) (Table 5).

Table 5. Mean values and 95% Confidence Interval (95% CI) for the total score of the LATCH tool according to sociodemographic, clinical and obstetric variables and the infant's hours of life

Variables	infant's hours of life		
	<24 hours	24 to 48 hours	>48 hours
Maternal age			
< 40 years	6.3 (6.0; 6.6)	7.1 (6.8; 7.4)	7.4 (7.0; 7.8)
≥ 40 years	-	7.3 (6.0; 8.9)	7.7 (6.7; 8.8)
p-value	-	0.756	0.629
Parity			
Primiparous	6.3 (5.9; 6.8)	7.4 (7.0; 7.9)	7.5 (7.0; 8.1)
Multipara	6.3 (5.8; 6.7)	6.8 (6.5; 7.2)	7.4 (6.9; 7.9)
p-value	0.869	0.032	0.716
Type of delivery			
Vaginal	6.6 (6.0; 7.3)	7.5 (6.9; 8.0)	7.5 (6.7; 8.3)
Cesarean	6.1 (5.8; 6.5)	7.0 (6.6; 7.3)	7.4 (7.0; 7.9)
p-value	0.194	0.125	0.924
Previous breast surgery			
No	6.4 (6.0; 6.8)	7.2 (6.9; 7.5)	7.5 (7.1; 7.9)
Yes	5.9 (5.3; 6.5)	6.5 (6.0; 7.2)	7.0 (6.2; 7.9)
p-value	0.170	0.048	0.317
Child's GA at birth			
< 37 weeks	-	6.0 (5.2; 6.9)	6.0 (5.0; 7.3)
≥ 37 weeks	6.3 (6.0; 6.6)	7.2 (6.9; 7.5)	7.5 (7.1; 7.9)
p-value	-	0.006	0.014

Generalized linear model with gamma probability distribution and log link function. GA - Gestational age

Discussion

The maternity hospital where the study was conducted represents a population of higher socioeconomic level that differs from the reality of the country, but this does not nullify the magnitude of the scientific findings, as this is the first study to investigate the assessment parameters of the LATCH tool in Brazil. A larger sample size with different populations could expand these results (Appendix 1).

The LATCH represents a simple tool for the nurse's more objective assessment and monitoring of the breastfeeding technique.[2,13] This can contribute to the routine of assessment and planning nursing care in prioritizing the care of women who are breastfeeding in the maternity.

The difficulties of the breastfeeding technique using the LATCH scale were: poor latch, inaudible swallowing, with uncomfortable and inappropriate positioning. The type of nipple was not mentioned in relation to breastfeeding difficulty. There is also a considerable relationship between hours of life and total score. The older the infant, the higher the to-

tal LATCH score. The cutoff score identified was 6, and the trend is that the more hours of life the higher the score, based on the intervening variables: presence of breast surgery, infant with gestational age < 37 weeks and birth weight < 2,500 grams.

The parameters of latch and comfort behaved in a related way, the latch score changed significantly between <24 hours and >48 hours. This finding is in line with the literature, in which latching improvement is observed as the infant's practice days go by, whereas comfort is greater in the initial period, when nipples are intact, as the increase in persistent exposure to incorrect latching reduces the individual score for this item.[14,15] A study shows that the complaint of pain and nipple injury in the first days postpartum is very frequent, with a mean pain value of 6.2.[14] The rate of this complaint increases over the days, and its apex is reached on the fourth day postpartum,[15] which reinforces the importance of early identification of pain and/or nipple injury to avoid complications.[16] Breastfeeding management on the first day postpartum is effective for the prevention of nipple pain and its effective diagnosis and treatment are crucial to prevent weaning.[17,18]

On the other hand, in the positioning and swallowing parameters, the differences found showed an increasing improvement in the items. These differences were identified in the total LATCH score when comparing infants aged <24, 24-28 and >48 hours of life. These findings are in line with the literature that presents an improvement in the practice of positioning during breastfeeding according to the time of experience of the mother-child pair,[2,16,17] as well as resulting from the Lactogenesis II from 48 hours postpartum, which naturally increases the volume of milk ingested by the child and facilitates the swallowing auscultation by the professional.[19,20] Note that swallowing can be evaluated using a stethoscope for an easier auscultation in the first feed, when the volume of milk is smaller.[2]

With regard to the type of nipple, although in the present study it was not identified as a difficulty by the LATCH tool, it is known fact that nipples classified as malformed (inverted and flat nipple) are related to greater breastfeeding problems, while protruding nipples can be facilitators.[17,20,21] The result found is probably justified by the majority (98%) of women studied presenting protruding nipples.

In addition to the assessment by item of the tool, the identification of the total score can help in the daily monitoring of the pair regarding the breastfeeding technique. In the present study, was identified a progressive increase in the total score over the days of the infant's life, and this result converges with the literature that shows an improvement in the technique over the days of life.[22] Infants aged >48 hours had a total score greater than 5 (≥ 6, ≥7 and ≥8) when compared to infants <24 hours. This finding contributes to a direction in defining the cutoff point for the scores presented by the mother-child pair in a breastfeeding assessment, in which a minimum total score of 6 can be classified as satisfactory. This result was consistent with Shah et al.,[22] who demonstrated that a LATCH score >6 at discharge increases the chance of exclusive breastfeeding occurring in the sixth week postpartum by five times. Similarly to Sowjanya et al.,[3] who identified a 93% sensitivity and 66% specificity for a score ≥6 at birth, and 94% and 82% for the LATCH ≥8 at discharge (48 hours postpartum), respectively, thereby increasing the chance of breastfeeding in the sixth week postpartum by nine times. On the other hand, Sowjanya et al.,[3] suggest the interpretation of the LATCH tool considering the classification: Poor (0-3), Moderate (4-7) and Good (8-10). Although this classification objectively guides the nurse, the study does not detail how the categories were determined and limits its use in practice. Jensen et al.,[2] the creator of the LATCH tool, emphasizes the importance of correcting all items individually, when needed, correcting the difficulties found in a timely and global manner. Thus, it is possible to state that the total score ≥6 is a good cutoff point to identify the needs for greater support from the hospital staff without losing the individual view of each item on the tool. New studies can explore the cutoff points and relate them to the professional's behavior conducive to breastfeeding, thus providing a better targeting of systematized care in maternity by nurses.

As for the relationship between the total LATCH score and sociodemographic characteris-

tics, women who had breast surgery, infants born at gestational age <37 weeks and birth weight <2,500 grams had lower scores. This result demonstrates the need to prioritize the care of this pair during hospitalization, confirmed by the literature, in which premature and small-for-gestational-age infants have more difficulties to breastfeed namely drowsiness, maintenance of the latch, suction and frequency of breastfeeding.[23,24] With regard to breast surgery, although the literature is not consistent in confirming which issues of the items of the LATCH scale are related to surgery, studies show a greater risk of the infant not being exclusively breastfed.[25,26]

The LATCH tool proved to be useful for planning nursing care for breastfeeding women. Low LATCH scores indicate the need for active intervention to help identify and guide mothers at risk of early weaning.[27]

Conclusion

The use of the LATCH was useful to assess the relationship between women's difficulties related to the technique and sociodemographic, obstetric and neonatal characteristics during hospitalization. The assessment of the items latch, swallowing, comfort and positioning varies according to the hours of life and should be considered individually, in addition to the parameter of the total score, aimed at guiding the nursing team in planning daily care in the maternity hospital. For infants aged <24 hours, attention regarding correct positioning and guidance regarding the best breastfeeding practice are necessary. The group of women who had breast surgery, infants born at <37 weeks and weighing <2,500 grams may need more attention from the nurse.

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Collaborations

Griffin CMC, Amorim MHC, Almeida FA, Marcacine KO, Goldman RE and Coca KP contributed to the study design, data analysis and interpretation, article writing, critical review of the intellectual content and approval of the final version to be published.

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Appendix 1. Sociodemographic, clinical and obstetric characteristics by infant's age at the time of collection

Variables	Infant's hours of life			Total (n = 162)
	<24 hours (n = 43)	24 to 48 hours (n = 74)	>48 hours (n = 45)	
Maternal age				
< 40 years	43	71	39	153
≥ 40 years	0	3	6	9
Parity				
Primiparous	23	34	20	77
Multipara	20	40	25	85
Type of delivery				
Vaginal	13	22	11	46
Cesarean	30	52	34	116
Previous breast surgery				
No	32	61	38	131
Yes	11	13	7	31
Infant's GA at birth				
< 37 weeks	0	6	3	9
≥ 37 weeks	43	68	42	153
Birth weight				
< 2.500 grams	1	1	3	5
≥ 2.500 grams	42	73	42	157
Apgar at 1 minute				
< 7	1	5	2	8
≥ 7	42	69	43	154