

Breastfeeding self-efficacy and length of exclusive breastfeeding among adolescent mothers

Autoeficácia na amamentação e duração do aleitamento materno exclusivo entre mães adolescentes

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Keywords

Breast feeding; Self efficacy; Trust; Adolescent; Maternal and child health

Descritores

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Abstract

Objective: To verify the association between breastfeeding self-efficacy of adolescent mothers and length of exclusive breastfeeding.

Methods: Longitudinal and prospective study. The Brazilian version of the *Breastfeeding Self-Efficacy Scale* was used to evaluate breastfeeding self-efficacy, and a questionnaire was administered through telephone contact at 30, 60 and 180 days postpartum to evaluate child feeding. **Results:** Of the participants, 56.90% presented a high level of breastfeeding self-efficacy. The prevalence of exclusive breastfeeding was of 62% at 30 days, 52.59% at 60 days and 16% at 180 days postpartum. There was no significant association between confidence and length of exclusive breastfeeding.

Conclusion: Confidence was not a predictive factor in the prevalence of exclusive breastfeeding among adolescent mothers. However, there is an evident need for new strategies so that adolescents who have complications in these periods are embraced and helped.

Resumo

Objetivo: Verificar a associação entre a autoeficácia na amamentação de mães adolescentes e a duração do aleitamento materno exclusivo. **Métodos:** Estudo longitudinal e prospectivo. Para avaliação da autoeficácia na amamentação foi utilizada a versão brasileira da *Breastfeeding Self-Efficacy Scale* na maternidade, e para avaliação da alimentação da criança foi aplicado um questionário, por meio de contato telefônico, com 30, 60 e 180 dias pós-parto.

Resultados: 56,90% das participantes apresentaram alto nível de autoeficácia para amamentar. A prevalência AME foi de 62% em 30 dias, 52,59% em 60 dias e 16% em 180 dias pós-parto. Não houve associação significativa entre a confiança com a duração do aleitamento materno exclusivo.

Conclusão: A confiança não foi um fator preditivo da prevalência do aleitamento materno exclusivo, entre as mães adolescentes. No entanto, evidencia-se a necessidade de novas estratégias para que as adolescentes que passam por intercorrências nestes períodos sejam acolhidas e auxiliadas.

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Introduction

Breastfeeding is considered essential for maternal and child health. Scientific evidence suggests that breastfeeding is the most appropriate food for children, from birth to the first years of life, contributing to the health of children and mothers, in addition to having benefits to the family and society.^(1,2) Due to this evidence, the World Health Organization (WHO) and the Brazilian Ministry of Health recommend that all infants receive exclusive breastfeeding (EBF) up to the sixth month of life and, after this period, the breastfeeding should be supplemented with other food up to 2 years or more.^(3,4)

Despite the evidence of the benefits of breastfeeding, both for the health of the child and for the woman, it is found that breastfeeding rates fall short of what is recommended by WHO and, consequently, both mothers and children cannot fully enjoy the benefits of this practice in the short and long term.⁽⁵⁾

Maternal age has been considered a factor of significance for exclusive breastfeeding. Data from the II Prevalence Survey on Maternal Breastfeeding in Brazilian capitals and the Federal District, conducted in 2009, indicate that mothers between the ages of 20 and 35 years were part of the highest EBF indexes, 44%, when compared to adolescent mothers, 35.8%,⁽³⁾ demonstrating the difficulties that may exist when analyzing adolescent breastfeeding.

Several scientific studies have turned to this specificity of adolescent mothers that influence the beginning and maintenance of breastfeeding, and have reinforced the need for a biopsychosocial approach to these mothers, as well as the importance of support by professionals, partners and family during all steps of this process.^(6,7)

Maternal confidence in breastfeeding is also evidenced as a variable that influences the initiation and maintenance of breastfeeding.^(8,9) Studies have shown that women who perceive themselves to be competent as mothers tend to breastfeed for longer than those who do not have this perception, which also encompasses how comfortable they feel in this nursing function.⁽¹⁰⁻¹²⁾

The concept of maternal confidence in breastfeeding ability, theoretically conceptualized as Breastfeeding Self-efficacy (BSE), was developed based on the Cognitive Social Theory proposed by Bandura, and relates to the woman's perception of her ability to breastfeed her child; this means that mothers need to believe that they have the knowledge and skills to successfully breastfeed their children for this practice to be successful.⁽¹³⁾

Despite these findings, maternal confidence was still little explored among adolescent mothers. The prior knowledge of adolescent mothers' confidence in the practice of breastfeeding may contribute to the reduction of rates of early weaning and infant morbidity and mortality. Thus, the objective of this study was to verify the association between breastfeeding self-efficacy among adolescent mothers and the length of exclusive breastfeeding, in the interval of 30, 60 and 180 days postpartum, and also to check the association of sociodemographic and obstetric variables with the self-efficacy levels of adolescent mothers.

Methods

This is a longitudinal prospective, observational and analytical study developed at the rooming-in unit of a public maternity located in the city of Ribeirão Preto, state of São Paulo. The reference population consisted of all adolescent mothers admitted to the maternity unit in rooming-in care with their children. Sample size was calculated with information from the Nursing Annual Report of the maternity where the study was conducted, and previous research involving maternal confidence to breastfeed⁽¹⁴⁾ based on the monthly longitudinal follow-up of the selected sample units. Thus, considering a tolerable sample error of 5%, a 95% confidence level, and a predicted loss of 10%, the sample consisted of 160 adolescent mothers.

The adolescents were selected by means of a random drawing in the rooming-in unit following the inclusion criteria: mothers with at least

24 hours postpartum; mothers who were physically able to breastfeed and had already breastfed; mothers who had full-term children; mothers who were accompanied by their children in the rooming-in unit; mothers who were accompanied by a legal guardian; having a fixed telephone number or cell phone.

After being aware of the research and ethical aspects involved, those who agreed to participate signed a free and informed consent form (FICF). Moreover, the authorization of the adolescents' legal guardians was also requested through the signing of the FICF, so that they could participate in the research.

Data were collected between January and December 2014. A questionnaire in the rooming-in unit after at least 24 hours postpartum and after the mothers had already breastfed, which contained sociodemographic and obstetric information of the participants, and the Brazilian version of the Breastfeeding Self-Efficacy Scale (BSES) for the evaluation of breastfeeding self-efficacy were applied.

The BSES is a Likert scale containing 33 questions divided into two domains: Technical and Intrapersonal Thinking. Each question presents five possibilities of response ranging from 1 to 5, being 1-totally disagree; 2-disagree; 3-sometimes agree; 4-agree; 5-totally agree.⁽¹⁴⁾ The total score of the instrument varies from 33 to 165 points, and self-efficacy levels in breastfeeding are classified according to the score obtained as follows: low self-efficacy (33 to 118 points), moderate self-efficacy (119 to 137 points), and high self-efficacy (138 to 165 points). Thus, the postpartum women responded whether, and with what intensity, they agreed or disagreed with each statement.

Subsequently, telephone contact was made in the intervals of 30, 60 and 180 days postpartum with each adolescent mother, who answered the third data collection instrument consisting of questions related to the feeding offered to the child (breastfeeding and / or complementary feeding) and complications during the breastfeeding period.

Data analysis was based on descriptive statistics to characterize the sample. To verify the relationship between breastfeeding self-efficacy and lengths of breastfeeding, the analysis of variance (ANOVA) and the Pearson Correlation Coefficient were performed; to check the association between the qualitative variables, the data were submitted to Fisher's Exact Test. For all statistical analyses, a significance level of 5% ($\alpha = 0.05$) was considered.

Results

A total of 160 adolescent mothers with a mean age of 16.88 years (SD = 1.30) participated in this study. Of the participants, 45.60% declared themselves to have brown skin, most of them (60.60%) reported having complete primary education and 51.90% did not stop studying because of the pregnancy. Most of them (66.90%) declared to have some religion, 45.60% to be married de facto, but a significant portion reported being single (43.80%). Of the adolescents, 49.40% reported living in their own homes, 86.30% did not work out, and the average monthly family income was 2.14 minimum wages. As for the help with the newborn care, 98.80% stated that they would have some type of help, and among these, 59.49% said that they would have their mother's help.

The majority of adolescents declared to be primigravida (92.50%) and primipara (93.10%); 93.80% reported having a living child. Regarding the current gestation, most of them (71.30%) reported not having planned the pregnancy, started prenatal care in the first trimester of pregnancy (64.20%), and had six prenatal visits or more (84.20%). Most adolescents (81.30%) had normal delivery, 32.50% presented some type of complication during the gestational period, 6.30% had some kind of complication during labor and/or delivery, and 6.90% reported some type of complication in the postpartum period; 50.60% had a male baby, and 49.40% female, and 98.75% of the newborns had adequate birth weight. Most of the participants (53.10%) re-

ported having breastfed their baby in the first hour of life, and at the time of data collection in the rooming-in unit 148 (92.50%) were on exclusive breastfeeding.

Regarding self-efficacy in breastfeeding, the majority of postpartum women (56.90%) had a high level of self-efficacy, 35% of them had moderate self-efficacy, and 8.10% presented low self-efficacy in breastfeeding.

Regarding the prevalence of exclusive breastfeeding among adolescent mothers in the three follow-up periods in the postpartum, 62% of the participants kept EBF within 30 days after delivery; 52.59% kept EBF up to 60 days postpartum, and 16% kept EBF up to 180 days.

The analysis between self-efficacy in breastfeeding and exclusive breastfeeding at 30, 60 and 180 days postpartum is presented in table 1. There was no statistically significant difference between these variables ($p = 0.1519$, $p = 0.2570$ and $p = 1.0000$ respectively).

Early weaning was observed over the months, with 10 mothers ($n=150$) interrupting breastfeeding in the first month, and 25 mothers in the second month ($n = 135$) and 60 mothers weaning their babies in the sixth month 60 ($n = 100$). It is noteworthy that telephone contacts continued to be made only for mothers who kept breastfeeding.

Table 1. Analysis of breastfeeding self-efficacy associated with the prevalence of exclusive breastfeeding at 30, 60 and 180 days post-partum

Variables	Self-efficacy			Total n(%)	p-value*
	Low n(%)	Moderate n(%)	High n(%)		
EBF at 30 days postpartum					
Yes	07(4.67)	27(18.00)	59(39.33)	93(62.00)	0.1519
No	06(4.00)	24(16.00)	27(18.00)	57(38.00)	
Total	13(8.67)	51(34.00)	86(57.33)	150(100.00)	
EBF at 60 days postpartum					
Yes	04(2.96)	22(16.30)	45(33.33)	71(52.59)	0.2570
No	07(5.19)	25(18.52)	32(23.70)	64(47.41)	
Total	11(8.15)	47(34.81)	77(57.04)	135(100.00)	
EBF at 180 days postpartum					
Yes	01(1.00)	06(6.00)	09(9.00)	16(16.00)	1.0000
No	08(8.00)	28(28.00)	48(48.00)	84(84.00)	
Total	09(9.00)	34(34.00)	57(57.00)	100(100.00)	

*Fisher's Exact Test; EBF - Exclusive breastfeeding

Table 2 shows the analysis of the final time of exclusive breastfeeding in days, distributed according to the classification of the levels of self-efficacy in breastfeeding: low, moderate and high. Among the participants who presented low confidence to breastfeed, the mean EBF was 64.15 days. Regarding the adolescents who presented moderate confidence in breastfeeding, the mean EBF was 66.38 days. For those who demonstrated high confidence, the mean EBF was 82.85 days.

Table 2. Breastfeeding self-efficacy related to the final time of exclusive breastfeeding in days

Variables	Self-efficacy		
	Low (n=13)	Moderate (n=56)	High (n=91)
Mean EBF	64.15 days	66.38 days	82.85 days
Median	39.00	33.50	60.00
Minimum	6.00	6.00	2.00
Maximum	180.00	180.00	180.00
Standard deviation	59.82	61.82	60.90

EBF - Exclusive breastfeeding

The association between the self-efficacy variable and the sociodemographic and obstetric characteristics showed that the variables "complications in pregnancy" and "complications in labor and/or childbirth" presented statistically significant associations. The adolescents who did not have any complications during pregnancy presented greater confidence in breastfeeding ($p = 0.0069$), when compared to those who had some type of complication in this period. Still, the adolescents who did not have any complications during labor and/or delivery had a higher level of confidence in breastfeeding ($p = 0.0316$), as shown in table 3.

Discussion

In this study, most adolescents presented high self-efficacy for breastfeeding, with BSES scores averaging 139.01; it should be noted that the time of 24 hours postpartum was respected for all the participants, and all of them were approached for the research after having carried out the practice of breastfeeding. A study carried out in the Northeast

Table 3. Analysis of breastfeeding self-efficacy, associated with obstetric characteristics

Variables	Self-efficacy			Total n(%)	p-value*
	Low n(%)	Moderate n(%)	High n(%)		
Planned pregnancy					
Yes	02(1.25)	15(9.38)	29(18.13)	46(28.75)	0.4718
No	11(6.88)	41(25.63)	62(38.75)	114(71.25)	
Total	13(8.13)	56(35.00)	91(56.88)	160(100.00)	
Complication in pregnancy at the beginning of prenatal period (weeks)					
Up to 12	07(5.11)	27(19.71)	51(37.23)	85(62.04)	0.8524
More than 12	03(2.19)	18(13.14)	31(22.63)	52(37.96)	
Total	10(7.30)	45(32.85)	82(59.85)	137(100.00)	
Number of prenatal appointments					
Up to 5	0(0.00)	10(6.58)	14(9.21)	24(15.79)	0.3749
6 or more	12(7.89)	46(30.26)	70(46.05)	128(84.21)	
Total	12(7.89)	56(36.84)	84(55.26)	152(100.00)	
Type of delivery					
Vaginal	11(6.88)	43(26.88)	76(47.50)	130(81.25)	0.5772
C-section	02(1.25)	13(8.13)	15(9.38)	30(18.75)	
Total	13(8.13)	56(35.00)	91(56.88)	160(100.00)	
Complication in pregnancy					
Yes	08(5.00)	11(6.88)	33(20.3)	52(32.50)	0.0069
No	05(3.13)	45(28.13)	58(36.25)	108(67.50)	
Total	13(8.13)	56(35.00)	91(56.88)	160(100.00)	
Complication in labor and/or delivery					
Yes	03(1.88)	01(0.63)	06(3.75)	10(6.25)	0.0316
No	10(6.25)	55(34.38)	85(53.13)	150(93.75)	
Total	13(8.13)	56(35.00)	91(56.88)	160(100.00)	
Complication in postpartum					
Yes	00(0.00)	02(1.25)	09(5.63)	11(6.88)	0.2819
No	13(8.13)	54(33.75)	82(51.25)	149(93.13)	
Total	13(8.13)	56(35.00)	91(56.88)	160(100.00)	

with 172 adolescent mothers in which the short form of the BSES was applied showed a predominance of high breastfeeding self-efficacy in 84% of the participants.⁽¹⁵⁾ However, adolescents presented a deficit regarding the knowledge about the importance of breastfeeding for the health of the mother and baby binomial, as well as a lower self-efficacy score regarding the supplementation with artificial milk for the baby, and the practice of breastfeeding in a public environment.⁽¹⁵⁾ Considering that the literature suggests that younger mothers are less confident about breastfeeding when compared to adult mothers,⁽¹⁶⁾ these findings demonstrate the importance of approaching and working with adolescents in order to make them feel more relaxed and safer when breastfeeding, which may directly influence the increase in breastfeeding rates in this age group.

Although breastfeeding self-efficacy was high in the present study, there was a reduction in the EBF

index among adolescent mothers during a longitudinal follow-up up to the sixth month of life of the children. The mean duration of EBF was 75.56 days, corroborating the average found in the city of Ribeirão Preto, which was 71.1 days, according to the latest research.⁽¹⁷⁾ Another Brazilian study analyzed the prevalence of breastfeeding among adolescents, in which a drop in breastfeeding rates was observed throughout months.⁽¹⁸⁾ The six-month EBF rate among participants (16.0%) is below that recommended by the WHO, and is also lower than the rates found in Brazil (41%), and in other countries, with mothers of all ages, such as Paraguay (24.4%), Chile (48.8%) and Venezuela (29.90%).

Regarding the relationship between breastfeeding self-efficacy and the prevalence of EBF at 30, 60 and 180 days postpartum, no statistically significant association was found between these variables, corroborating a study carried out in São Paulo, which followed 100 mothers between 17 and 44 years old

up to 60 days postpartum, and did not observe an association between the mother's confidence and the length of exclusive breastfeeding either.⁽²⁰⁾ However, other studies pointed out that adolescent mothers with higher levels of breastfeeding self-efficacy, in the prenatal period or in the postpartum period, kept EBF for a longer period in the first months.^(8,21)

The analysis of the association between self-efficacy in breastfeeding and sociodemographic and obstetric variables showed that there was a statistically significant association for the variables "complication in pregnancy" and "complication in labor and/or delivery". It is known that the mother's ability to breastfeed her child (expectancy of self-efficacy) is linked to her emotional and physiological state, with experiences such as fatigue, pain, stress and anxiety reducing this mother's confidence in breastfeeding.⁽¹⁴⁾ Thus, it is assumed that the participants experienced a phase of possible pain, fatigue and / or stress that influenced their confidence to breastfeed when faced with complications during the pregnancy-postpartum cycle.

The identification of breastfeeding confidence among adolescents makes it possible to improve support for breastfeeding. This can contribute to the understanding of their situational context and the removal of social and structural obstacles that may interfere with a woman's ability to breastfeed in a confident, safe and calm manner.⁽²²⁾ The practicality and ease of application of the instrument BSES is highlighted, which has a low cost and has proven scientific evidence of reliability and validity to evaluate maternal confidence in breastfeeding among adult mothers, and also among adolescent mothers.

Although there was no statistically significant association between breastfeeding self-efficacy and length of EBF, it is noted that in clinical practice, adolescents who had high self-efficacy breastfed exclusively for longer. Regarding the association of breastfeeding self-efficacy and sociodemographic and obstetric variables, there was an association between confidence in breastfeeding and the presence of complications during pregnancy and labor and / or delivery. Thus, for clinical practice, the need for efforts by health professionals is evident, so that the adolescents who have complications in these periods

are embraced and helped to breastfeed with pleasure and effectively, both for them and for their children. As implications for the research, it is important to highlight that the present study was carried out in a maternity of usual risk, with a reduced rate of complications during the pregnancy-postpartum cycle. Thus, new studies should be carried out to investigate how these variables influence the construction of confidence to breastfeed among adolescent mothers, considering other regional contexts, other health services (that attend high obstetric risk, for example) and other methodological designs. The present study had as limitation the difficulty to directly follow-up the participants through individual appointments or home visits. However, the importance of telephone contact research for the development of the study is noteworthy, which allowed the follow-up of the participants according to what was planned, up to 180 days postpartum.

Conclusion

This study contributes with relevant results for the improvement of care to adolescent mothers and their children, since it provides subsidies that can help develop strategies for the empowerment of these mothers, making it possible to overcome difficulties and obstacles, facilitating the continuity of EBF until the sixth month of life of the child, and favoring the reduction of maternal-infant morbidity and mortality.

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Collaborations

Conde RG, Guimarães CMS, Gomes-Sponholz FA, Oriá MOB and Monteiro JCS declare that they contributed with the study design, data analysis and interpretation, writing of the article, relevant critical review of its intellectual content and final approval of the version to be published.

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