COMPARISON OF BREASTFEEDING SELF-EFFICACY BETWEEN ADOLESCENT AND ADULT MOTHERS AT A MATERNITY HOSPITAL IN RIBEIRÃO PRETO, BRAZIL

Carolina Maria de Sá Guimarães¹, Raquel Germano Conde², Bruna Cremasco de Brito³, Flávia Azevedo Gomes-Sponholz⁴, Mônica Oliveira Batista Oriá⁵, Juliana Cristina dos Santos Monteiro⁶

- ¹ Master's student, Graduate Program in Public Health Nursing, *Universidade de São Paulo* (USP), *Escola de Enfermagem de Riberão Preto* (EERP). Ribeirão Preto, São Paulo, Brazil. E-mail: carolguim@usp.br
- ² Master's student, Graduate Program in Public Health Nursing, EERP/USP. Ribeirão Preto, São Paulo, Brazil. E-mail: raquel. conde@usp.br
- ³ B.Sc. in Nursing from EERP/USP. Ribeirão Preto, São Paulo, Brazil. E-mail: bruna_cremasco@hotmail.com
- ⁴ Ph.D. in Public Health Nursing. Professor, Maternal-Infant and Public Health Nursing Department, EERP-USP. Ribeirão Preto, São Paulo, Brazil. E-mail: flagomes.sponholz@gmail.com
- ⁵ Ph.D. in Nursing. Professor, Nursing Department, School of Pharmacy, Dentistry and Nursing, *Universidade Federal do Ceará*. Fortaleza, Ceará, Brazil. E-mail: profmonicaoria@gmail.com
- ⁶ Ph.D in Public Health Nursing. Professor, Department of Maternal-Infant and Public Health Nursing, EERP/USP. Ribeirão Preto, São Paulo, Brazil. E-mail: jumonte@eerp.usp.br

ABSTRACT

Objective: to measure and compare the breastfeeding self-efficacy between adolescents and adults mothers in the immediate postpartum.

Method: is an observational, cross-sectional and comparative study, developed at a maternity hospital in Ribeirao Preto, Brazil. Data were collected between January and July 2014. The sample consisted of 306 adult mothers and 94 adolescent mothers. The breastfeeding self-efficacy scores were obtained using the Brazilian version of the Breastfeeding Self-Efficacy Scale. Student t-test was used to compare the values of breastfeeding self-efficacy between the groups of participants. We considered a 5% significance level (*p*=0.05).

Results: most adolescents and adults mothers (54%) presented high levels of breastfeeding self-efficacy and there was no statistically significant difference between the scores of the two groups (p=0.3482).

Conclusion: health professionals need to be careful about breastfeeding self-efficacy in order to direct specific actions for each group of mothers (adolescents and adult mothers) to improve the breastfeeding rates.

DESCRIPTORS: Breastfeeding. Self-efficacy. Confidence. Nursing. Maternal and child health.

COMPARAÇÃO DA AUTOEFICÁCIA NA AMAMENTAÇÃO ENTRE PUÉRPERAS ADOLESCENTES E ADULTAS EM UMA MATERNIDADE DE RIBEIRÃO PRETO, BRASIL

RESUMO

Objetivo: verificar e comparar a autoeficácia na amamentação entre puérperas adolescentes e adultas no pós-parto imediato.

Método: estudo observacional, transversal e comparativo, realizado no alojamento conjunto em uma maternidade, no município de Ribeirão Preto, São Paulo. A coleta de dados foi realizada de janeiro a julho de 2014. Participaram do estudo 306 puérperas adultas e 94 puérperas adolescentes. Para avaliar a autoeficácia na amamentação, foi utilizada a versão brasileira da *Breastfeeding Self-Efficacy Scale*. O teste t de Student foi usado para comparar os valores de autoeficácia entre os grupos participantes. Foi considerado um nível de significância de 5% (*p*=0,05).

Resultados: entre os dois grupos, a maioria (54%) apresentou autoeficácia elevada, e a diferença entre os escores não foi estatisticamente significativa (*p*=0,3482).

Conclusão: os profissionais devem estar atentos à autoeficácia na amamentação, direcionando ações específicas aos grupos de mulheres adolescentes e adultas, favorecendo assim o aumento dos índices de aleitamento.

DESCRITORES: Aleitamento materno. Autoeficácia. Confiança. Enfermagem. Saúde materno-infantil.

COMPARACIÓN DE LA AUTOEFICACIA DE LA LACTANCIA MATERNA ENTRE MADRES ADOLESCENTES Y ADULTAS EN UNA MATERNIDAD DE RIBEIRÃO PRETO, BRAZIL

RESUMEN

Objetivo: verificar y comparar la autoeficacia de la Lactancia Materna entre puérperas adolescentes y adultas en el posparto inmediato.

Método: estudio observacional, transversal y comparativo, realizado en el alojamiento conjunto de una maternidad, en la ciudad de Ribeirão Preto, Brazil. La recolección de datos fue realizada en el período de enero a julio de 2014. La muestra fue constituida por 306 madres adultas y 94 adolescentes. La versión brasileña de la Breastfeeding Self-Efficacy Scale evaluó la autoeficacia de la lactancia materna. Para comparar los valores de autoeficacia entre los grupos participantes, los valores fueron sometidos al test de *t-Student*. Fue considerado un nivel de significancia de 5% (*p*=0,05).

Resultados: entre los grupos participantes la mayoría (54%) presentó niveles elevados de autoeficacia, y la diferencia entre los resultados entre adolescentes y adultos no fue estadísticamente significativo (p=0,3482).

Conclusión: los profesionales deben de estar atentos a la autoeficacia en el amamantamiento, con el objetivo de direccionar acciones específicas a los grupos de mujeres adolescentes y adultas, favoreciendo así, el aumento de los índices de amamantamiento.

DESCRIPTORES: Lactancia materna. Autoeficacia. Confianza. Enfermería. Salud materno-infantil.

INTRODUCTION

The World Health Organization¹ (WHO) recommends exclusive breastfeeding for infants up to the sixth month of life and complementary breastfeeding until two years or older. The Brazilian Ministry of Health also follows this recommendation, due to the benefits for the health of the children, their mothers and their families.²⁻³

In the last three decades, breastfeeding rates have significantly improved in Brazil, which contributed to reduce childhood mortality in the country. ⁴⁻⁵ Despite this finding, the breastfeeding rates remain inferior to the recommendation by WHO. ¹⁻²

Scientific evidence demonstrates that early weaning is a complex phenomenon, which goes beyond biological determinism and is influenced by psychological, social and cultural factors, being characterized by the introduction of other foods into the diet of children under exclusive breast-feeding up to the age of six months.⁶ The mothers are aware of the benefits of breast milk, but it is observed that this knowledge is not sufficient to maintain breastfeeding over a long period, as recommended.⁷

The factors that can influence the duration of breastfeeding include maternal age.

Some studies involving adolescents demonstrate that the behavior towards breastfeeding is similar to the behavior of adult mothers, with high initial rates and an important drop up to the sixth month of life.⁸⁻¹¹ Some authors appoint, however, that the association between personal factors and

the condition of being an adolescent and having an intimate partner increases the risk of early weaning for the adolescents in comparison with the adult mothers.¹² On the other hand, there is a higher prevalence of starting breastfeeding among adult women, who are also more prone to breastfeeding longer than the adolescents.^{10,13-16}

Among adults as well as adolescents, it is observed that some of the variables related to the duration of the breastfeeding, such as the perception of little milk, personal and professional support and the experiences lived involve the construction or maintenance of maternal trust in one's ability to cope with a complex situation, which is the case of maternal breastfeeding. The Studies appoint that the intention to breastfeed and the confidence strongly influence the breastfeeding behavior. Therefore, maternal trust has been identified as an variable that influences the start and maintenance of breastfeeding. The professional support and trust has been identified as an variable that influences the start and maintenance of breastfeeding.

Differently from the variables that are not or hardly modifiable (such as marital status, educational level and socioeconomic conditions), maternal trust can be modified and lies within the health professionals' access. Its analysis permits identifying the women at greater risk for early weaning and making individual interventions when necessary. Studies that analyzed this variable among adult mothers identified that, the greater the woman's trust, the greater the chance of maintaining breastfeeding longer. Nevertheless, the trust to breastfeed among adolescent mothers has been hardly explored, although some studies have iden-

tified that the young maternal age is one of the characteristics of the women who wean early. 18,23

The woman's trust in her ability to breastfeed, or the self-efficacy in breastfeeding, is explained by the Theory of Self-Efficacy in Breastfeeding, developed by Dennis²⁴ based on the construct of trust or self-efficacy, which is part of Bandura's Cognitive Social Theory.²⁵ The self-efficacy construct refers to a factor that mediates the health behaviors, as individuals need to be convinced that they are able to successfully perform a given task or behavior, believing that they will achieve the expected health outcome. Hence, it should be understood that it is not enough for the individual to believe that a certain behavior can help him to achieve a specific objective. He needs to feel able to personally execute that behavior.²⁵

The choice to breastfeed is based on the expected result, which is influenced by four processes: a) if the mother decided to breastfeed or not; b) how much effort is made; c) is she will have self-encouraging or self-destructive patterns of thinking; and d) how she will emotionally respond to the breastfeeding difficulties. The expected self-efficacy, which also interferes in the choice of the breastfeeding behavior, is developed based on the four information sources: a) personal experience; b) vicarious experiences; c) verbal persuasion; and d) psychological and affective condition.^{24,26}

To assess the level of self-efficacy in breast-feeding, Dennis and Faux²⁷ developed and validated the Breastfeeding Self-efficacy Scale (BSES), a Likert scale whose content was elaborated based on the problems related to the practice and duration of breastfeeding presented in the literature, and has been adapted to different countries, including Brazil.²⁸ Evidence shows that the BSES is a valid and reliable tool that can be used to help health professionals working for breastfeeding, helping to identify women at greater risk of early weaning, as well as the area in which the woman experiences more difficulty.^{19,26}

Studies using the BSES prove that women with higher self-efficacy levels breastfeed longer when compared to women with a higher level of confidence. Nevertheless, no studies were found that compared the self-efficacy between adolescent and adult women. Hence, the objective in this study was to assess and compare maternal self-efficacy in breastfeeding skills between these two groups. This study is intended to help health

professionals working with mothers and infants and can contribute to implement actions that favor higher breastfeeding rates.

METHOD

An observational, cross-sectional and comparative study was undertaken of breastfeeding self-efficacy among adolescent and adult postpartum women, developed at the rooming-in unit of a public maternity in Ribeirão Preto, State of São Paulo. The study sample was calculated based on the information from the Annual Nursing Report at the maternity where the study took place, and an earlier study²⁸ involving the maternal confidence to breastfeed among Brazilian women. It was based on the comparison of means between two groups: adolescent postpartum women and adult postpartum women. Considering a tolerable sampling error of 5%, a 95% confidence level and an expected 10% loss, the sample consisted of 400 postpartum women, being 94 adolescents and 306 adults.

These postpartum women were selected by simple random sampling, through a draw at the rooming-in unit among the women who complied with the following inclusion criteria: postpartum women at least 24h after birth, literate, able to breastfeed, without visual, auditory and/or cognitive impairment, without pathologies or problems after birth, at the rooming-in unit with their infants, born with a gestational age >37 weeks, without special care needs such as phototherapy.

The data were collected between January and July 2014, the period considered to reach the calculated sample. The data were collected from Monday to Friday, in the afternoon, when few care routines happened at the rooming-in unit. Two master's students and one scientific initiation student collected the data through a structured interview, using a questionnaire and information collected from the participants' files. A pilot study was undertaken before the start of the data collection to adapt the best period to contact the postpartum women and the best approach. Two instruments were used to collect the data. The first was developed specifically for this study and considered the identification data and the sociodemographic characteristics, such as age, self-referred color, education, religion, occupation, marital status, type of housing, monthly income and type of help during postpartum (mother, mother-in-law, husband, others); and obstetric characteristics of participants, such as parity, pregnancy planning, prenatal care, date and type of delivery, sex and weight of infant at birth, breastfeeding in the first hour of life and type of feeding at the time of the data collection. The second instrument was the BSES, used to assessed the participants' self-efficacy in breastfeeding skills.

The BSES is a Likert scale with 33 questions, divided in two domains: Technical and Intrapersonal Thinking. Each question comes with five alternative answers, with scores ranging from 1 to 5, being 1-I totally disagree; 2-I disagree; 3-I sometimes agree; 4-I agree; 5-I totally agree. Hence, the total scale scores range between 33 and 165 points.²⁸ Self-efficacy in breastfeeding, identified through the scale, is distributed according to the scores obtained by adding up each question: low self-efficacy (33 to 118 points), medium self-efficacy (119 to 137 points), high self-efficacy (138 to 165 points).³⁰ This instrument has been tested in different phases of the pregnancy-postpartum cycle, and results support its use in any phase of the perinatal period.³¹ Being a self-applied instrument, the postpartum woman directly answered the BSES without interference by the researchers. Hence, the women answered if and how intensely they agreed or disagreed from each question.

The data were stored in a structured electronic worksheet through double data entry, which permitted the validation of the data, so as to eliminate possible errors and guarantee the reliability in the compilation of the data. To analyze the data, the statistical software Statistical Analysis System SAS® 9.0 and R version 3.0 were used.

To characterize the sample, the data analysis was based on descriptive statistics.

To compare the self-efficacy in breastfeeding between the study groups, the BSES scores were added up and the mean scores were calculated for the global instruments, for the domains (Technical and Intrapersonal Thinking) and for each postpartum group (adolescents and adults). The mean scores were submitted to Student's t-test. To use the test, it should be tested whether the variances between the two groups are statistically equal and whether the distribution of the data is normal. For this procedure, the PROC TTEST procedure was used in the software SAS® 9.0. For all

tests, significance was set at 5% (α =0.05). Results with p<0.05 and a 95% confidence interval were considered statistically significant.

Approval for the study was obtained from the Research Ethics Committee at the *Universidade de São Paulo*, *Escola de Enfermagem de Ribeirão Preto*, protocol 21346013.80000.5393.

RESULTS

Four hundred postpartum women were part of this study, being 94 adolescents and 306 adults.

As regards the adolescent women's sociodemographic characteristics, the participants were characterized with a mean age of 16.53 years (SD=1.44), 50% self-declared mulatto, 58% indicated finished primary education, 46% declared having a fixed partner and 52% mentioned living at their own home. Most participants (87%) declared having no paid job and gaining a mean monthly income of 2.23 minimum wages. Concerning the obstetric characteristics, most adolescents (93%) were pregnant for the first time and 65% indicated not having planned the pregnancy. As regards prenatal care, 60% started the monitoring in the first trimester of pregnancy, the majority (85%) having participated in six or more consultations. 86% had a normal birth, 57% breastfed during the first hour of life and 92% were in exclusive breastfeeding at the time of the data collection.

Among the 306 adult participants, the mean age was 26.49 years (SD=5.02). Among them, 42% self-declared mulatto, 48% concluded secondary education, 50% had a fixed partner and 41% lived in their own home. Most adult participants (59%) indicated no paid job and the mean income was 2.68 minimum wages. Concerning the obstetric data, 40% of the adults had multiple pregnancies, 35% having given birth multiple times and 76% indicated at least one abortion, 51% did not plan the pregnancy and the majority started prenatal care while still in the first trimester of pregnancy (71%), having six or more consultations during the pregnancy (87%). As regards the type of birth, 70% had normal birth. Fifty-nine percent breastfed in the first hour of life and the majority (91%) were in exclusive breastfeeding at the time of the data collection.

What self-efficacy in breastfeeding is concerned, in the total sample, 54% presented high self-efficacy. Table 1 shows the distribution of adolescents and adults in terms of self-efficacy.

Table 1 - Distribution of adolescent and adult postpartum women in the classification of breastfeeding
self-efficacy. Ribeirão Preto-SP, 2014

	Self-efficacy ranking					
Postpartum women	Low		Moderate		High	
	Frequency	0/0	Frequency	0/0	Frequency	%
Adolescent	11	11.70	32	34.04	51	54.26
Adult	40	13.07	99	32.35	167	54.58
Total	51	12.75	131	32.75	218	54.50

Table 2 shows the mean global scores between adolescents and adults and the comparison of means. No statistically significant difference (p=0.3482) was observed between the mean global scores of the adolescent and adult group, that is, between the groups studied, the self-efficacy level in breastfeeding was similar. This result has been

Table 2 - Comparison of means of global scores on Breastfeeding Self-efficacy Scale between adolescent and adult postpartum women. Ribeirão Preto-SP, 2014

Postpartum	Comparison			95% CI	v
women	n	Mean	Difference	30 70 CI	Ρ
Adolescent	94	138.86	1.79	-1.96 - 5.54	0.3482
Adult	306	137.07			

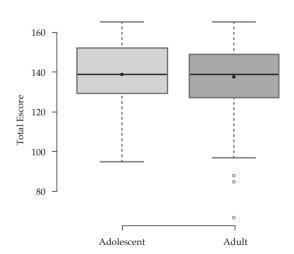


Figure 1 - Distribution of mean total scores on Breastfeeding Self-efficacy Scale between adolescent and adult postpartum women. Ribeirão Preto-SP, 2014

illustrated in Figure 1 by the Boxplot distribution. In the analysis of the Technical domain, the results of the comparison of means showed no statistically significant difference between the groups studied, as can be observed in Table 3. The p-value in the comparison of means showed p=0.2142. This result demonstrated that, concerning the Technical domain of breastfeeding, the level of self-efficacy between the groups was similar. As regards the Intrapersonal Thinking domain, the comparison of means showed no statistically significant difference either, with p=0.7139, that is, the level of self-efficacy for Intrapersonal Thinking aspects is similar between adolescents and adults. Table 4 displays the data for this analysis.

Table 3 - Comparison of mean scores in the Technical domain of the Breastfeeding Self-efficacy Scale between adolescent and adult postpartum women. Ribeirão Preto-SP, 2014

Postpartum		Comp	arison	95% CI	p
women	n	Mean	Difference		
Adolescent	94	83.32	1.49	-0.87 - 3.85	0.2142
Adult	306	81.83			

Table 4 - Comparison of mean scores in the Intrapersonal Thinking domain of the Breastfeeding Self-efficacy Scale between adult and adolescent postpartum women. Ribeirão Preto-SP, 2014

Postpartum	Comparison			95% CI	
women	n	Mean	Difference	30 70 CI	Ρ
Adolescent	94	55.54	0.30	-1.30 - 1.89	0.7139
Adult	306	55.25			

DISCUSSION

In this study, the data were collected 24h after birth, with a view to discovering the self-efficacy level at the start of breastfeeding. Most participants (54.50%) presented a high self-efficacy level.

Among the adolescent postpartum women, the mean BSES score was 138.86, indicating high self-efficacy; among the adults, the mean score was 137.7, indicating moderate self-efficacy, but very close to the bottom limit of high self-efficacy. The results support other studies^{26,30} that identified a moderate self-efficacy level among adult participants. What the adolescents' result is concerned, no studies were found that analyzed the levels of maternal self-efficacy in breastfeeding in this population using the BSES. In a study in Canada, however, involving adolescent mothers and applying the short version of the BSES, it was demonstrated that, among the adolescents who started breastfeeding, 57% presented high self-efficacy in prenatal care.³² In independent studies developed in China during pregnancy and during the hospitalization among adult postpartum women, low self-efficacy33-34 was found, differently from the Brazilian reality.

In the analysis of each BSES domain, what the Technical domain is concerned, the mean score was 83.32 among the adolescents and 81.83 among the adults; for the Intrapersonal Thinking domain, the mean score of the adolescents was 55.54 and of the adults 55.55. These results also differ from a study³³ in which a mean score of 63.94 was found for Intrapersonal Thinking and 52.74 for the Technical domain. Pregnant women with lower self-efficacy concerning breastfeeding techniques, having sufficient milk production and family support were observed in a study that concluded that the low self-efficacy levels among them may be due to the limited orientation about breastfeeding received in prenatal care and the inappropriate preparation for breastfeeding.34

The higher self-efficacy levels found in this study can be justified by the fact that the maternity hospital studied is accredited by the Baby-Friendly Hospital Initiative (BFHI). Brazilian studies in hospital not accredited by BFHI observed higher levels of self-efficacy in the first 24h after birth, differing from this study by the use of the BSES-short version. The influence of the actions practiced at the BFHI maternity hospital on the breastfeeding self-efficacy levels should be further investigated. In addition, it is important to highlight that, in Brazil, beyond the BFHI, other public policies and programs in favor of breastfeeding play an impor-

tant role in the encouragement of breastfeeding, and these governmental strategies have triggered the breastfeeding rates in Brazil; nevertheless, the rates remain inferior to the recommendations.^{2,4} Analyses in the course of the last years demonstrate that, around the world, the breastfeeding rates have stagnated in developed and developing countries, evidencing the need to strengthen the successful programs and to develop new strategies that are sensitive to the situation of women who breastfeed and their families.^{37,39}

Identifying the self-efficacy levels in the immediate postpartum and the postpartum women at greater risk for early weaning and who need greater support is an important strategy for health professionals, as women with difficulties to start and establish breastfeeding present low levels of self-efficacy and are particularly vulnerable to interrupting breastfeeding in the first 72h after birth.⁴⁰

The comparison of the self-efficacy results between adult and adolescent postpartum women presented no statistically significant difference between these two groups, which appoints that maternal age as an isolated variable did not influence the level of maternal self-efficacy in breastfeeding in the immediate postpartum. A study developed in Australia found no association either between maternal age and the level of self-efficacy in breastfeeding.²⁹ In a study developed in Canada,26 it was observed that the maternal age interfered in the levels of self-efficacy in breastfeeding when associated with the educational level and parity, concluding that older women with a higher education level and more children presented higher self-efficacy scores. In another study developed in China, however, it was demonstrated that, the older the mother, the lower the level of breastfeeding self-efficacy, showing an inverse association between maternal age and the level of self-efficacy.³³ Despite these findings, it is highlighted that these studies only involved adult women and that no other study was found in which the results were compared between adolescent and adult mothers. In one study, whose sample included adolescent mothers as from 16 years of age, the mean BSES score was 146.6 points, indicating a high self-efficacy level,⁴¹ in that study, however, the adolescents and adults were not analyzed separately, nor was the influence of (adolescent or adult) age on the scores.

CONCLUSION

Breastfeeding is of fundamental important for maternal-child health and for society. The moment of birth and the hospital practices in the immediate postpartum interfere directly in the construction of maternal self-efficacy in breastfeeding skills.

The is a pioneer study in the analysis and comparison of breastfeeding self-efficacy between adolescent and adult postpartum women. Independently of the age, the women in these groups did not present significant different with regard to the study variable. The participation of postpartum women admitted to a maternity hospital accredited by the IHAC can be considered a study limitation, as these institutions act strongly in favor of breastfeeding, which may have influenced the participants' answers.

Besides this study, few studies were found in the scientific literature that analyzed self-efficacy in breastfeeding in the immediate postpartum. In addition, although the IHAC is a strategy that can strengthen maternal self-efficacy, no studies were found that related the actions or indicators of the Baby-Friendly Institutions with self-efficacy in breastfeeding. Hence, also considering that the BSES can be used at any time in the perinatal period, further research is suggested, so that the women can be monitored prospective and retrospectively, with a view to expanding the knowledge and monitoring of mother and infant with regard to breastfeeding.

As an implication for professional practice, it is highlighted that the assessment of self-efficacy in breastfeeding is an important variable and can be used to identify the women with low levels, facilitating the practice of strategies that contribute to increase the breastfeeding rates.

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