Original Article

Translation and cultural adaptation of the Breastfeeding Self-Efficacy Scale to Portuguese*

Tradução e adaptação cultural da Breastfeeding Self-Efficacy Scale para o português

Traducción y adaptación cultural de la Breastfeeding Self-Efficacy Scale para el portugués

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ABSTRACT

Objectives: Translate and adapt the Breastfeeding Self-Efficacy Scale (BSES) to the cultural reality of Brazil and evaluate the content validity of the Portuguese version, so that it can be used in the Brazilian population. **Methods**: The study was made in two phases (1- Protocol translation and cultural adaptation, and 2- Validity of Content). **Results**: The total score ranged from 93 to 162 points (M = 127.03, SD = 19.62). When considering only women who bore many children, the score scale ranged from 106 to 156 (M = 131.66, SD = 15.91). The translated version proved to be easy to understand, showing good consistency and semantic validation. The Index for the Validation of Content was 0.84 and the Cronbach's alpha = 0.90. **Conclusions:** The findings suggest that the BSES is suitable for screening the maternal confidence in its potentiality to breastfeed. However, it is necessary to evaluate the psychometric properties of this instrument in samples with different social and educational levels, and in other regions of Brazil

Keywords: Self efficacy; Breast feeding; Validation studies

RESUMO

Objetivos: traduzir e adaptar a *Breastfeeding Self-Efficacy Scale* (BSES), para a realidade cultural do Brasil e avaliar a validade de conteúdo da versão em português, para que possa ser utilizada na população brasileira. **Métodos**: O estudo envolveu duas fases (1. protocolo de tradução e adaptação cultural e 2. validade de conteúdo). **Resultados**: O escore total variou de 93 a 162 pontos (M = 127,03; DP = 19,62). Quando considerado apenas as multíparas, a pontuação da escala variou de 106 a 156 (M = 131,66; DP = 15,91). A versão mostrou ser de fácil compreensão, obtendo-se adequada validação semântica e de consistência. O Índice de Validação de Conteúdo foi 0,84 e o coeficiente alfa de Cronbach = 0,90. **Conclusões**: Os achados sugerem que a BSES é adequada para *screening* da confiança materna no seu potencial para amamentar. No entanto, é necessário avaliar as propriedades psicométricas deste instrumento em amostra com diferentes níveis sociais e educacionais e em outras regiões do Brasil.

Descritores: Auto-eficácia; Aleitamento materno; Estudos de validação

RESUMEN

Objetivos: traducir y adaptar la escala *Breastfeeding Self-Efficacy Scale* (BSES), para la realidad cultural de Brasil y evaluar la validez de contenido de la versión en portugués para que pueda ser utilizada en la población brasileña. **Métodos**: El estudio se realizó en dos fases (1- protocolo de traducción y adaptación cultural, y 2- Validación del contenido). **Resultados**: El puntaje total varió de 93 a 162 puntos (P = 127,03; DE = 19,62). Cuando fueron consideradas apenas las multíparas, la puntuación de la escala varió de 106 a 156 (P = 131,66; DE = 15,91). La versión mostró ser de fácil comprensión, obteniéndose una adecuada validación semántica y de consistencia. El Índice de Validación de Contenido fue 0,84 y el coeficiente alfa de Cronbach = 0,90. **Conclusiones**: Los hallazgos sugieren que la BSES es adecuada para detectar la confianza materna en su potencialidad para amamantar. Sin embargo, es necesario evaluar las propiedades psicométricas de este instrumento en muestras con diferentes niveles sociales y educacionales y en otras regiones de Brasil.

Descriptores: Autoeficacia; Lactancia maternal; Estudios de validación

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INTRODUCTION

Early termination of breastfeeding presents outcomes not only on infants' health. It also suddenly stops the bond between mothers and babies, delays mothers' recovery and return to previous physical condition, and affects families' budget because of the cost of the formula. Brazilian nursing has played an important role in the *Programa de Aleitamento Materno* (Breastfeeding Program), encouraging women to breastfeed with an increase in rates of sole breastfeeding and thus, decrease in early termination of breastfeeding and in infants' diseases[1].

One of the aspects that influence early termination of breastfeeding is maternal confidence in her breastfeeding skills. Studies show that 27% of the women with low levels of confidence in breastfeeding during the prenatal period stopped breastfeeding within the first week after childbirth[2]. Women with low confidence levels in breastfeeding were 3.1 times more likely to stop breastfeeding than those who were totally confident[3].

Bandura[4-6] studied how confidence or self-efficacy was built and he highlighted the Social Learning Theory and defined his own theory as Social-Cognitive or Social-Cognitive Theory[7], that is the reason why the social cognitive theory is also known as the self-efficacy theory.

This author[8] noticed that self-efficacy guides health behaviors because people need to believe they can start health behaviors and thus they can make the necessary efforts to reach them. Thus, women must believe they can breastfeed (self-efficacy) before they start breastfeeding.

Therefore, the confidence in breastfeeding describes women's beliefs or expectations of having enough knowledge and skills to breastfeed their babies successfully[9]. Supported by the theory of self-efficacy[10], the authors[11] stated that this confidence is built from the following four sources of information that base the expectation of self-efficacy: personal experience (previous positive experiences), vicarious experience (seeing other women breastfeeding, watching videos with breastfeeding guidelines), verbal persuasion (support and encouragement by people that are close and respected by these women) and emotional and physiological state (physical and psychological reactions to breastfeeding). Thus, these elements will directly influence the choice, performance, and maintenance of exclusive breastfeeding.

Acknowledging that women's behavior towards breastfeeding had not been studying within the perspective of self-efficacy, Dennis and Faux[11] developed the Breastfeeding Self-Efficacy Scale (BSES) to assess maternal confidence in breastfeeding. To develop the scale, literature reviews have been carried out with a careful assessment of the self-efficacy concept. The content forming the assumptions of the scale emerged from problems related with the practice and duration of breastfeeding found in the literature[11].

The use of the scale enables health professionals to previously know in which area women have lower self-efficacy (by checking the score in each statement), therefore making it possible to introduce strategies for care and promotion of personalized breastfeeding before mothers decide not to breastfeed or to stop breastfeeding early. This can lead to medium and long term reduction in rates of early termination of breastfeeding and, thus, a consequent improvement in the quality of life of mothers and infants.

BSES has been used to measure self-efficacy of mothers in their ability to breastfeed. Although it has been created and validated in Canada, BSES has been validated into English[12], Spanish[13], Chinese[14] and Polish[15], encouraging the translation into Portuguese and its application.

From what has been exposed, the objectives of the present study were to translate and adapt the Breastfeeding Self-Efficacy Scale[11] to the cultural Brazilian reality and assess the validity of the content of the Brazilian version so that it can be used by the Brazilian population. The validation of such instrument will be significantly relevant to promote child-maternal health in areas where early termination of breastfeeding (according to the length of sole breastfeeding recommended by the World Health Organization) is still frequent.

METHODS

Type of study and participants

This is a two-phase, cross-sectional study. The first phase was a translation, back translation and cultural adaptation involving nine professionals among translators, reviewers and judges. Additionally, in the pretest, 30 women who were being taken care of during the prenatal period and after childbirth by public health services were included. Criteria used to select judges were: to be Brazilian and fluent in English, to have clinical and/or research experience in child health and/or breastfeeding, and to have a Ph.D. To select informants the following criteria were adopted: women without physical or mental limitations that hindered understanding the instrument; women that accepted to be interviewed during the prenatal period or after childbirth; women whose infants did not present physical problems that hindered breastfeeding (e.g. Cleft palate). As for pregnant women, they were interviewed as of the third trimester and mothers were interviewed at least six hours after giving birth.

On the second phase, the validity of the content of the adapted instrument was carried out from the assessment of three professionals that deal with breastfeeding. The study was carried out in Fortaleza, Ceará between May and June 2007, pregnant women and mothers were interviewed in two public health units. The study has been approved by the Research Ethics Committee at Universidade Federal do Ceará, it followed the demands from Resolution # 196/96 of the National Health Council[16]. The translation was authorized, adapted and validated through electronic mail with the BSES author, Dr. Cindy-Lee Dennis.

Sociodemographic questionnaire

The socioeconomic and cultural profile was assessed through a structured questionnaire to assess the main characteristics of the sample and the perception of women regarding the scale.

Breastfeeding Self-Efficacy Scale

This is a Likert-type scale with 33 items divided into two

domains: Technical and Intrapersonal Thoughts. Each question presents five answer possibilities with scores ranging from 1 to 5. Total scores of the scale range from 33 to 165. The higher the score, the greater women's confidence in their potential to breastfeed, thus the more likely they are to start and keep breastfeeding for a longer period.

Study phases

Translation and adaptation

The methodology to adapt BSES followed the stages of a protocol of cultural adaptation which was considered quite complete[17]. This protocol entails the adjustment of the items forming the scale as well as instructions and answer options with five stages: 1. initial translation, 2. synthesis of the translation, 3. back translation, 4. judge committee and 5. pretest of the final version (Picture 1).

A committee formed by three judges and an English proofreader assessed semantic, idiomatic, experimental and conceptual equivalence proposed in the adaptation protocol[17]. During the pretest, the amount of time women spent answering the scale was recorded, later on, they were asked about their comprehension of each statement and the answer items.

Content validation and reliability

In the present study, content validity was carried out by three nurses with 9 to 20 years of experience with breastfeeding; two have a Nursing PhD; two work directly with care to nursing women, two work in teaching and one has simultaneous experience in the areas of care, teaching, and research. One of the experts had a previous experience with adaptation and validation of psychometric scales.

After the final version of the scale was made by translators and judges, the experts in breastfeeding received the scale and an instrument with three questions regarding each item: 1. to assess the comprehension of the items, 2. to classify the items into domains and 3. to assess the level of relevance of the items of the scale. The assessment of the level of relevance was carried out using a scale that ranges from 1 to 4 (1. Irrelevant, 2. Little relevant, 3. Really relevant, 4. Very relevant) and it was a base to calculate the Content Validation Index (CVI).

Content validity enables researchers to assess if the scale and its questions represent the content domain the researcher wants to measure[18]. As it is a very subjective process, content validity has been widely criticized in the scientific environment and some strategies have been developed to make it more objective. One of these strategies is to build CVI as suggested by Waltz and Bausell[19] and used by other researchers to quantify the extension of the agreement between experts[20-21].

CVI was calculated from the average content validity index for all the items of the scale (S-CVI/Ave), proportion of items of a scale that reaches scores 3 – relevant - and 4 – very relevant – by all experts (S-CVI/UA) and content validity of the individual items (I-CVI)[22].

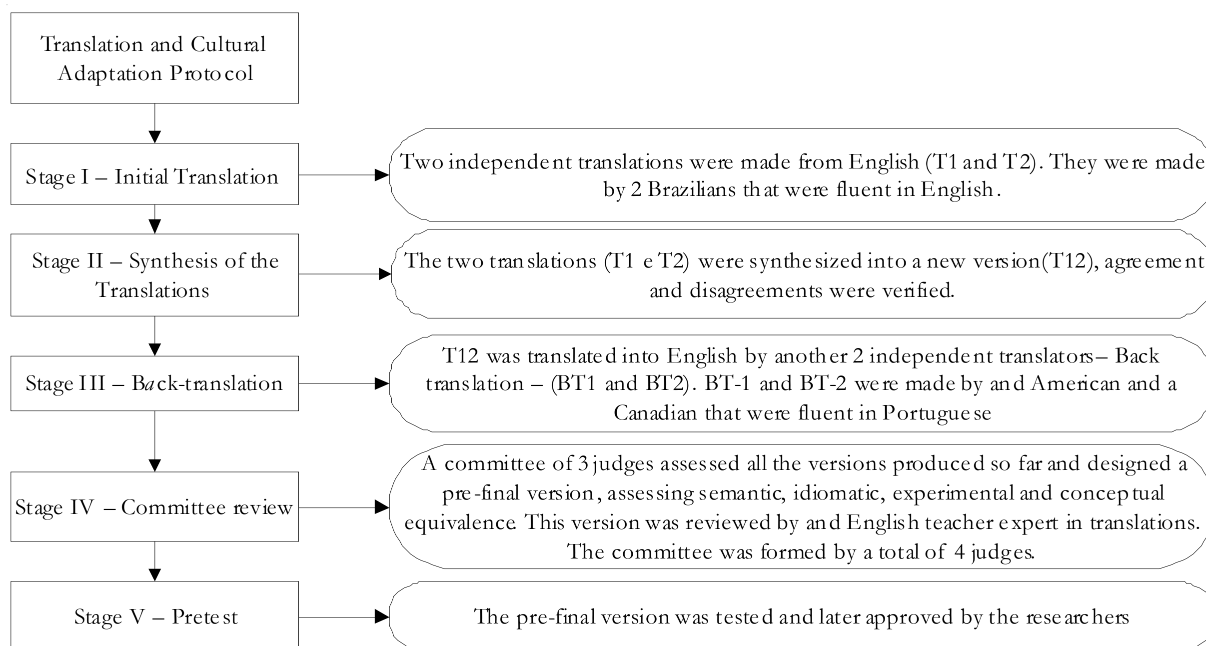
Cronbach's alpha was used to check internal consistency or reliability of the Breastfeeding Self-Efficacy.

Statistical analysis

The information collected was organized with Statistical Package for the Social Sciences (SPSS Inc., Chicago, United States, version 14.0) so that data could be processed. Exploratory analysis of data had descriptive statistical and frequency tests as well as Cronbach's alpha. A p value <0.05 was considered significant.

RESULTS

The versions obtained in the translation and adaptation process are presented on Chart 1. The final scale is on Table 1, which also presents the item-total relationship, mean, and



Picture 1 – Graphic representation of the stages of the translation and cross-cultural adaptation protocol (Beaton et al, 2002).

Table 1 – Assessment of the semantic equivalence between the original English instrument and the final Portuguese version. Fortaleza, July/October, 2007.

	Original	Final
1	I can always hold my baby comfortably during breastfeeding.	Eu sempre seguro meu bebê confortavelmente quando dou de mamar.
2	I can always position my baby correctly at my breast.	Eu sempre coloco o meu bebê corretamente no peito.
3	I can always focus on getting through one feed at a time.	Eu sempre me concentro para completar uma mamada de cada vez. (na hora da mamada presto atenção somente no meu bebê).
4	I can always recognize the signs of a latch.	Eu sempre sinto quando o bebê pega o peito.
5	I can always take my baby off the breast without pain to myself.	Eu sempre consigo tirar o bebê do meu peito sem sentir dor.
6	I can always determine that my baby is getting enough breast milk.	Eu sempre sinto quando o meu bebê está mamando o suficiente.
7	I can always successfully cope with breastfeeding like I have with other challenging tasks.	Eu sempre lido com amamentação com sucesso, da mesma forma que eu lido com outros desafios. (supera com sucesso a amamentação e as demais situações da vida).
8	I can always depend on my family to support my decision to breastfeed.	Eu sempre posso contar com a minha família para apoiar a minha decisão de amamentar.
9	I can always motivate myself to breastfeed successfully.	Eu sempre me sinto motivada para dar de mamar direitinho.
10	I can always monitor how much breast milk my baby is getting by keeping track of my baby's urine and bowel movements.	Eu sempre acompanho a quantidade de leite que o bebê está tomando ao observar a urina e as fezes. (atenta para a troca de fraldas 6 vezes ou mais durante o dia).
11	I can always breastfeed my baby without using formula as a supplement.	Eu sempre alimento o meu bebê sem usar leite em pó como suplemento.
12	I can always ensure that my baby is properly latched for the whole feeding.	Eu sempre percebo se o meu bebê está pegando o peito direitinho durante toda a mamada.
13	I can always manage the breastfeeding situation to my satisfaction.	Eu sempre lido com a amamentação de forma a me satisfazer.
14	I can always manage to breastfeed even if my baby is crying.	Eu sempre posso amamentar mesmo se o meu bebê estiver chorando.
15	I can always keep my baby awake at my breast during a feeding.	Eu sempre consigo manter meu bebê acordado no peito durante a amamentação.
16	I can always maintain my milk supply by using the "supply and demand" rule.	Eu sempre tenho leite suficiente de acordo com as necessidades do bebê.
17	I can always refrain from bottle feeding for the first 4 weeks.	Eu sempre evito usar mamadeira no primeiro mês. (não uso mamadeira no primeiro mês).
18	I can always feed my baby with breast milk only.	Eu sempre alimento o meu bebê somente no peito. (toda vez que o bebê está com fome dou o peito).
19	I can always stay motivated to breastfeed my baby.	Eu sempre me mantenho motivada para amamentar o meu bebê. (quero amamentar).
20	I can always count on my friends to support my breastfeeding.	Eu sempre posso contar com o apoio das minhas amigas para amamentar. (ajuda, força das amigas).
21	I can always keep wanting to breastfeed.	Eu sempre sinto vontade de continuar amamentando.
22	I can always feed my baby every 2-3 hours.	Eu sempre amamento meu bebê a cada 2-3 horas.
23	I can always keep feeling that I really want to breastfeed my baby for at least 6 weeks	Eu sempre quero dar de mamar por no mínimo 1 mês e meio. (amamentar um mês e meio ou mais tempo).
24	I can always comfortably breastfeed with my family members present.	Eu sempre posso dar de mamar confortavelmente na frente de pessoas da minha família.
25	I can always be satisfied with my breastfeeding experience.	Eu sempre fico satisfeita com a minha experiência de amamentar.
26	I can always comfortably breastfeed in public places.	Eu sempre consigo amamentar confortavelmente em lugares públicos.
27	I can always deal with the fact that breastfeeding is time consuming.	Eu sempre posso lidar com o fato de que amamentar exige tempo. (mesmo consumindo o meu tempo eu quero amamentar).
28	I can always finish feeding my baby on one breast before switching to the other breast.	Eu sempre amamento meu bebê em um peito e depois mudo para o outro.
29	I can always continue to breastfeed my baby for every feeding.	Eu sempre continuo amamentando meu bebê a cada alimentação dele. (a cada mamada).
30	I can always feel if my baby is sucking properly at my breast.	Eu sempre sinto se o bebê está chupando o peito direitinho.
31	I can always accept the fact that breastfeeding temporarily limits my freedom.	Eu sempre posso aceitar o fato de que amamentar limita temporariamente minha liberdade. (organizo as minhas saídas de casa para trabalho, festas com amamentação do bebê).
32	I can always manage to keep up with my baby's breastfeeding demands.	Eu sempre consigo adequar as minhas necessidades às necessidades do bebê. (organizo minhas necessidades de banho, sono, alimentação com a amamentação do bebê).
33	I can always tell when my baby is finished breastfeeding.	Eu sempre sei quando o meu bebê terminou a mamada.

Cronbach's alpha of the scale according to the exclusion of each item.

After the scale went through the first three stages of the adaptation process described on Figure 1, the judges that assessed the scale decided to replace the expression 4 weeks - item 17 and 6 weeks – item 23 for "one month" and "one month and a half", respectively, because the expression "in weeks" is most commonly used in the clinical field, and it is not very commonly used among pregnant women in Brazil, which could hinder the comprehension of the items. Sometimes we have used the word "breastfeeding" and other times we have used "nursing" to use a more friendly expression, closer to mothers.

The expressions *correctly*, *properly* and *successfully* were, sometimes, replaced by the expression *quite right* (items 9, 12, 30) to make the scale lighter, avoiding giving women the idea of something imposed. Other expressions were also replaced such as: *recognize* and *determine* replaced by *feeling* (items 4 and 6); *bowel movements* was replaced by *feces* (Item 10) since many mothers find it hard to identify the presence of bowel movements; *formula* was adjusted for *milk powder* (item 11) because it is more familiar to the clientele; *supply and demand rule* was replaced by the expression *according to infants' needs* (item 16).

At item 30, the committee made the following change: *sucking at my breast* was replaced by *sucking the breast*, considering that infants "sucks" the breast and gets the milk. The expression *keep up with* (item 32) does not have a literal translation into Portuguese and it is difficult to adapt, therefore, we have replaced it for *adequar (adjust)*.

During proofreading by an English teacher, the expression *I can always* was considered autocratic and distant from women (a singularity of the verb *can*) therefore, the expression *I can always* was only maintained when there was an external agent (items 8, 14, 15, 20, 24, 26, 27, 31 and 32). In the remaining items the base expression was "I always" and the verb in the present rather than in the infinitive as in the original text.

It was difficult to assess the answer items to be used in the scale. In the English version of the Portuguese translation the answers ranged from 1= *not confident at all* - to 5= *very confident* (pattern 1). However, because the terminology of confidence is not commonly used, the judge committee created a new standard of answers ranging from 1=totally disagree to 5=totally agree (pattern 2). During the pretest the two patterns of answers were used and women were asked which one was easier to understand. After women chose the pattern, it was used thorough the application of the scale. Thus, 17 participants chose pattern 2, and, therefore, it was chosen to be the final version of the scale adapted into Portuguese. This change in the pattern of answer, in addition to consider the perspective of women, was also discussed with the author of the scale and was done in other adaptations of BSES[14].

For the pretest, 30 women were interviewed, 15 pregnant women (4 primipara and 11 multipara) and 15 mothers (6 first time mothers and 9 multipara), with ages ranging from 16 to 43 years old (M=26.33 and SD=7.17). Overall, women were married or lived with partners (24), did not work, and their main occupation was to be a housewife (16); as for education, 13 had finished high school, which is 12 years of study. Women involved in pretest were being cared for in the prenatal period or after birth in public health services, thus, a low income was expected; however, there has been a great variation in income, ranging from R$ 50.00 to R$ 1,900.00/month with a mean of R$ 672.14. Among women with previous child birth, normal delivery was prevalent (14) compared to C-section (11). Thirteen women had a previous experience with breastfeeding and 5 breastfed exclusively their previous infants for more than four months.

As for the application of the scale, 14 women (12 pregnant women and 2 mothers) answered alone (under the supervision of a researcher) and 16 preferred to be interviewed. The fact that only two mothers answered the scale alone may be due to physical burnout after child birth (even though the scale was applied six hours after delivery) or because they had to care for their babies, since the scale was applied while rooming in.

The time women spent completing the scale ranged from 4 to 15 minutes (M=9; SD=2.75). All participants found the scale easy to understand; however, 15 had questions at least in one item and two women had questions about five items. Items that led to more questions were 29 (8 women), 23 (6 women), and 32 (5 women). To minimize this problem, to make comprehension of the scale easier, and to avoid double meanings that could lead to an interpretation mistake, the pre-tested version was returned to judges and examples or additional expressions were built and placed in brackets right after items 3, 7, 10, 17, 19, 20, 23, 27, 29, 31 and 32. After the expressions were inserted, the scale was once again applied to these women and they agreed that items were easier to understand.

Total score of the scale ranged from 93 to 162 (M= 127.03; SD = 19.62). When only multipara were considered the score of the scale ranged from 106 to 156 (M= 131.66; SD= 15.91). Cronbach's alpha was 0.90 indicating an excellent internal consis-

Table 2 – Item-total correlation, mean, and Cronbach's alpha of the Breastfeeding Self-Efficacy Scale. Fortaleza, July/October, 2007.

	Final version of the Breastfeeding Self-Efficacy Scale in Portuguese	Item-Total Correlation	Mean of the scale if the item is deleted	Cronbach's alpha if the item is deleted
	Technical Domain			
1	Eu sempre seguro meu bebê confortavelmente quando dou de mamar.	0.457	123.133	.906
2	Eu sempre coloco o meu bebê corretamente no peito.	0.660	123.433	.903
4	Eu sempre sinto quando o bebê pega o peito.	0.654	122.866	.904

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Continuation...

	Final version of the Breastfeeding Self-Efficacy Scale in Portuguese	Item-Total Correlation	Mean of the scale if the item is deleted	Cronbach's alpha if the item is deleted
5	Eu sempre consigo tirar o bebê do meu peito sem sentir dor.	0.541	124.100	.904
6	Eu sempre sinto quando o meu bebê está mamando o suficiente.	0.502	122.900	.905
10	Eu sempre acompanho a quantidade de leite que o bebê está tomando ao observar a urina e as fezes. (atenta para a troca de fraldas 6 vezes ou mais durante o dia).	0.612	124.100	.903
11	Eu sempre alimento o meu bebê sem usar leite em pó como suplemento.	0.623	123.566	.903
12	Eu sempre percebo se o meu bebê está pegando o peito direitinho durante toda a mamada.	0.428	122.933	.906
14	Eu sempre posso amamentar mesmo se o meu bebê estiver chorando.	0.469	123.266	.905
15	Eu sempre consigo manter meu bebê acordado no peito durante a amamentação.	0.525	124.200	.905
16	Eu sempre tenho leite suficiente de acordo com as necessidades do bebê.	0.540	123.766	.904
18	Eu sempre alimento o meu bebê somente no peito. (toda vez que o bebê está com fome dou o peito).	0.372	123.066	.907
22	Eu sempre amamento meu bebê a cada 2-3 horas.	0.608	122.933	.903
26	Eu sempre consigo amamentar confortavelmente em lugares públicos.	0.436	124.500	.906
28	Eu sempre amamento meu bebê em um peito e depois mudo para o outro.	0.297	122.900	.908
29	Eu sempre continuo amamentando meu bebê a cada alimentação dele. (a cada mamada).	0.633	122.933	.903
30	Eu sempre sinto se o bebê está chupando o peito direitinho.	0.580	123.200	.904
31	Eu sempre posso aceitar o fato de que amamentar limita temporariamente minha liberdade. (organizo as minhas saídas de casa para trabalho. festas com amamentação do bebê).	0.249	123.700	.909
32	Eu sempre consigo adequar as minhas necessidades às necessidades do bebê. (organizo minhas necessidades de banho. sono. alimentação com a amamentação do bebê).	0.402	122.900	.906
33	Eu sempre sei quando o meu bebê terminou a mamada.	0.518	123.466	.905
	Intrapersonal Thoughts Domain			
3	Eu sempre me concentro para completar uma mamada de cada vez. (na hora da mamada presto atenção somente no meu bebê).	0.783	123.433	.901
7	Eu sempre lido com amamentação com sucesso. da mesma forma que eu lido com outros desafios. (supera com sucesso a amamentação e as demais situações da vida).	0.590	123.333	.904
8	Eu sempre posso contar com a minha família para apoiar a minha decisão de amamentar.	0.437	123.066	.906
9	Eu sempre me sinto motivada para dar de mamar direitinho.	0.337	122.900	.907
13	Eu sempre lido com a amamentação de forma a me satisfazer.	0.490	122.666	.906
17	Eu sempre evito usar mamadeira no primeiro mês. (não uso mamadeira no primeiro mês).	0.057	123.300	.913
19	Eu sempre me mantenho motivada para amamentar o meu bebê. (quero amamentar).	0.463	122.733	.906

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	Final version of the Breastfeeding Self-Efficacy Scale in Portuguese	Item-Total Correlation	Mean of the scale if the item is deleted	Cronbach's alpha if the item is deleted
20	Eu sempre posso contar com o apoio das minhas amigas para amamentar. (ajuda. força das amigas).	0.401	123.833	.907
21	Eu sempre sinto vontade de continuar amamentando.	0.463	123.166	.906
23	Eu sempre quero dar de mamar por no mínimo 1 mês e meio. (amamentar um mês e meio ou mais tempo).	0.214	123.900	.911
24	Eu sempre posso dar de mamar confortavelmente na frente de pessoas da minha família.	0.607	123.300	.903
25	Eu sempre fico satisfeita com a minha experiência de amamentar.	0.418	122.733	.907
27	Eu sempre posso lidar com o fato de que amamentar exige tempo. (mesmo consumindo o meu tempo eu quero amamentar).	0.235	123.100	.910

tency. Item-total correlation (Table 1) showed 5 items below 0.30; however, the items remained on the scale for further analysis.

As for content, the items were considered understandable and in 66% of the times experts placed items in the domain correctly as defined in the original version. Results of the expert analysis regarding the level of relevance of each item were organized on a database so that CVI could be calculated. In the three forms used we have obtained CVI= 0.84, indicating a good level of agreement between the experts.

DISCUSSION

The prevalence of breastfeeding the Northeast is 85.9% in the first 30 days after birth, and it reaches 74.8% 120 days after birth. When sole breastfeeding is considered, the prevalence decreased to 49.9% at 30 days after birth and 19.3% at 120 days after birth. In the specific case of Fortaleza – CE, the prevalence of sole breastfeeding is 73.4% and 29%, at 30 and 120 days after birth respectively[23]. These figures show the presence of an important prevalence of early termination of breastfeeding that can contribute to higher rates of diarrheal diseases. Studies show that early termination of breastfeeding is one of the factors associated with diarrhea episodes in babies under one year[24]. Additionally, early termination of breastfeeding (before 12 weeks) can have outcomes on infants' health until 18 months of age[25].

Because of this situation, developing strategies to contribute to sole breastfeeding promotion and decrease in early termination of breastfeeding is important for public health and it can lead to positive implications for health promotion of infants and their families.

BSES has been currently used to assess the confidence of mothers in their ability to breastfeed in several countries[11-15]. The present study carried out, for the first time, the translation and adaptation of the BSES to a South American country, which makes its application relevant in the Brazilian cultural reality.

The translation and adaptation of instruments previously validated to other countries is a legitimate procedure which also reduces costs and facilitates the exchange between researchers internationally. "The adaptation of an instrument to another language is a complex process. Due to the cultural differences, a simple translation cannot be performed [...]. To adjust an instrument to another language, technical, linguistic and semantic aspects have to be taken into account"[26].

BSES, as the main object of the present study, went through a process of translation and cross-cultural adaptation that took over one year to be finished. The following aspects were responsible for the adaptation process to take so long: careful selection of the translation and adaptation protocol to be more reliable, to that end, we have chosen an accurate protocol formed by five stages[17-18]. Some researchers have suggest less complex processes that optimize the time and seem to be as valid as the others[27], however, further studies, using simplified methods, should be carried out to assess if the quality of the translated and adjusted instrument is not impaired; the selection of individuals that cooperated to each stage of the protocol was also relevant to obtain an instrument which was close to the original (measuring the same construct), and which also matched the Brazilian cultural reality; the pretest demands time, however, it is necessary and valid because without the initial perception of the target audience it is impossible to predict the directions the scale may take. Additionally, the sample involved in the pretest portraits the reality of the female population that uses the public health service. From the pretest, we could check words and expressions that lead to confusion and could interfere in the results.

Changes in the expression in *weeks* to *months* and in the pattern of answers also occurred in other BSES adaptations[14-15]. This change in the pattern of answers considered the perspective of women and was also discussed with the author of the scale through e-mail. The insertion of examples in some items had the goal to make comprehension of some women easier and to avoid biases regarding interpretation of outcomes. Furthermore, this strategy has been used by other researchers[28]. Portuguese is the official language of other countries; however, new adaptations may be necessary to use this instrument in other Portuguese-speaking countries.

Content validity is to check if the coverage of the area of the content assessed is appropriate, based on a subjective judgment. As BSES had its domains (Technical and Intrapersonal Thoughts) and statements validated in its original content (English), a revalidation of the content was carried out into Portu-

guese. This is relevant to assess if each statement forming BSES is related with the Brazilian cultural relationship and, therefore, if its presence in the Portuguese version makes sense.

BSES content was considered understandable, relevant, and was categorized into domains. The scale reached a CVI = 0.84 (very close to the original scale = 0.86)[11] indicating that the scale represents the content to be studied on breastfeeding in Brazil, since a CVI over 0.80 is desirable[30]. These findings show that the content of the scale designed in the Canadian context, when adapted to Portuguese encompasses situations that are common to the routine of Brazilian breastfeeding mothers and, therefore, it makes sense to assess it according to the Brazilian cultural reality.

Cronbach's alpha was 0.90, demonstrating excellent internal consistency and it was very close to Cronbach's alpha values of the versions applied in Canada (0.96)[11], Australia (0.97)[12], Puerto Rico (0.96)[13] and China (0.93)[14]. The item-total correlation showed five items (17, 23, 27, 28 and 31) below 0.30; however, we have decided to leave it on the scale for further analysis. This action was also taken in the original study[11]. Additionally, withdrawing any of the items separately did not influence the final outcome of Cronbach's alpha. Only the exclusion of five items together increased Cronbach's alpha to 0.92. Withdrawing items with values of item-total correlation lower than 0.30 is recommended only when Cronbach's alpha is too low (lower than 0.70)[30].

The adaptation process tried to make the scale as simple as possible so that people of different social groups and regions of the country could understand, however, studies with other sample groups should be carried out.

CONCLUSION

The use of the referred scale enables health professionals to previously know the confidence of each woman in breastfeeding. Therefore, identifying women with smaller chances of breastfeeding (lower scores), allows for professionals to know the areas women have a lower confidence level (by checking the score in each item), thus making it possible to introduce strategies for care and promotion of personalized breastfeeding, minimizing the risks of not breastfeeding or of early termination of breastfeeding. This can lead to medium and long term reduction in rates of early termination of breastfeeding and increase in the time of sole breastfeeding. Although the assessment of the psychometric properties has been carried out in Fortaleza - CE, the psychometric properties of this instrument should be assessed in other samples with different social and educational levels and in other regions from Brazil.

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