



OBJN  
Online Brazilian Journal of Nursing

ENGLISH

Federal Fluminense University

AURORA DE AFONSO COSTA  
NURSING SCHOOL



Original Articles



## Influence of sociodemographic and behavioral conditions on self-efficacy in breastfeeding: a cross-sectional study

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### ABSTRACT

**Aim:** To assess the socio-demographic and behavioral risk factors for postpartum women in terms of breastfeeding self-efficacy. **Method:** This is a cross-sectional study, conducted with 322 women interned in joint accommodation, using the Breastfeeding Self-efficacy Scale (BSES-SF). The internal consistency was evaluated by Cronbach's alpha (0.89) and the association of self-efficacy with other variables was performed using the chi-square test. Logistic regression was entered by means of the model of the variables with  $p < 0.20$ . **Results:** There was a statistically significant association between self-efficacy and the number of people living on the family income ( $p = 0.014$ ), people who do not use drugs ( $p = 0.003$ ), who have two or more children ( $p = 0.009$ ), breastfeeding ( $p = 0.018$ ) breastfeeding exclusively for five to six months ( $p = 0.002$ ) and who have had positive experiences ( $p < 0.001$ ). **Conclusion:** professionals should consider self-efficacy in their professional context, as it establishes interactions with the characteristics of mothers, significantly influencing breastfeeding.

**Descriptors:** Self-efficacy; Breast Feeding; Rooming-in Care; Postpartum Period.

## INTRODUCTION

In Brazil, promoting strategies for Breastfeeding (BF) have been implemented under the National Health System since the 1980s, with a view to increasing the prevalence of this practice. Concomitantly, there is a joint effort for monitoring the prevalence and BF indicators in Brazilian state capitals and the Federal District, allowing an analysis of its evolution<sup>(1)</sup>.

With regard to exclusive breastfeeding (EBF) in children under six months old, 23 capitals are in reasonable condition (prevalence between 12% and 49%), and four (Belém, Campo Grande, FD and Florianópolis) are in good standing (Between 50% to 89%). As to the duration of BF, the situation is considered bad in most cases (median lower than 17 months) and only Macapá is classified as reasonable (median between 18 and 20 months)<sup>(1)</sup>.

In other countries, the situation encountered is not different from Brazil, because the EBF overall rates declined, showing a prevalence of 38% in children under six months. This percentage is equal to the developing countries and comes near to the least developed countries, which have a prevalence of 37%<sup>(2)</sup>.

Therefore, the BF rates, mainly the EBF, are still low, which can be explained by some determinants that affect this practice, such as maternal education, the effectiveness of maternity leave, the implementation of programs and policies aimed at expanding breastfeeding and the support exerted by health professionals and the social network involving these women<sup>(1,3-5)</sup>.

Among these, maternal self-efficacy in nursing, which may influence the onset and maintenance of BF, can also be highlighted. Self-efficacy indicates confidence in having

sufficient knowledge and skills to successfully breastfeed your baby<sup>(6-7)</sup>.

Self-efficacy also determines the level of motivation, because the stronger the confidence in personal capacities, the greater and longer are the efforts<sup>(8)</sup>. Thus, people will not engage in an activity and will not adopt goals with particular purposes unless they believe they are able to develop it successfully.

As a result, a study reveals that during the prenatal period, 27% of women with low levels of confidence in breastfeeding discontinued BF in the first week after delivery. Moreover, women with low confidence level in BF were 3.1 times more likely to stop breastfeeding than those who had complete confidence<sup>(7)</sup>.

Thereby, knowing the self-efficacy of pregnant women and their characteristics indicates evidence in terms of the attitudes of women regarding breastfeeding. This evidence may contribute to the development of new strategies for promoting breastfeeding and increase its prevalence. Thus, the aim of this study is to analyze the socio-demographic and behavioral risk factors for postpartum women in terms of breastfeeding self-efficacy.

## METHODS

This is a quantitative approach research that uses a cross-sectional design, developed in the joint accommodation of a teaching hospital located in the Midwestern region of the State of Rio Grande do Sul. The convenience sample of 322 mothers was calculated with 5% accuracy, confidence range of 95%, significance level of 0.05, and sampling error of 0.05. It was based on the number of births performed in the institution in 2011 (1,938 births).

The inclusion criteria were women in the puerperal period immediately and after six hours of birth, aged 12 years and older<sup>(9)</sup>, accompanied by a newborn (RN) having good vitality, effective suction capacity and thermal control. Exclusion criteria were women who had clinical complications at the time of data collection; obstetric complications in the postpartum period; mothers with some difficulty understanding and verbal expression; maternal infectious condition that prevented or contraindicated BF; and postpartum women admitted in the joint accommodation with children hospitalized in the Neonatal Intensive Care Unit.

Data collection took place from December 2011 to March 2012. The puerperal women were selected from the medical records, according to the admission demands at the unit, and the data collection occurred by primary source (directly with the mothers) in their own beds or in a private room according to the preference of the women.

To this end, the Breastfeeding Self-Efficacy Scale-Short Form (BSES-SF) was used, since it is a Likert scale, with proven validity and reliability (Cronbach's alpha 0.74) and presents 14 items divided into two areas: technical and Intrapersonal Thoughts<sup>(10)</sup>. This scale offers five answer choices, one through five, respectively: strongly disagree, disagree, sometimes agree, agree and strongly agree; and the total score ranges from 14 to 70 points, distributed according to the sum of each item: low self-efficacy (14 to 32 points), medium self-efficacy (33 to 51 points) and high self-efficacy (52 to 70 points)<sup>(7,11)</sup>.

In addition to the scale, a form aimed at characterizing the sociodemographic and behavioral profile of the sample was used. The variables *previous breastfeeding experience*, *exclusively breastfeeding duration* and *breastfeeding pleasure* refer to the information

provided by the mothers regarding their previous children, regardless of the children's current ages.

The internal consistency of BSES-SF was evaluated by the internal consistency coefficient of Cronbach's alpha, and the value obtained was 0.89. This value confirms the suitability of the instrument to the chosen group; it can be compared to the original version 0.94<sup>(6)</sup>; and it exceeds the values obtained in Turkey (0.87)<sup>(12)</sup> and in the northeast of Brazil (0.74)<sup>(10)</sup>.

The analysis of variables was performed using the Statistical Package for Social Sciences software (SPSS, version 20.0, and license No. 10101131007) by means of the chi-square test. The odds ratio (OR) and confidence intervals (95% CI) were calculated. The variables that presented  $p < 0.20$  were included in the logistic regression (enter method).

The study was approved by the Ethics Committee of the Federal University of Santa Maria (CAAE: 0323.0.243.000-11). The ethical aspects of the research involving human beings were guaranteed through the use of an Informed Consent Form and, in the case of adolescent mothers, an Assent Form.

## RESULTS

The average age of mothers was 26.4 years ( $SD = + 6.70$ ) and some of them were single (66.1%). As for education, 35.7% had low educational levels and an average monthly income of 1.9 ( $SD = + 0.49$ ) minimum wage.

In addition, 67.1% did not work; 66.5% were multiparous and the majority (91.6%) had previous breastfeeding experience. With respect to breastfeeding self-efficacy, 261 mothers (81.1%) had high self-efficacy, while 61 (18.9%) had a mean self-efficacy.

From Table 1, it can be observed that the age group between 13 and 19 years is considered a risk factor in terms of maternal breastfeeding self-efficacy.

A statistically significant association between the number of people living on an income (p=0.014) with breastfeeding self-efficacy was found. This indicates that, when several people (four or more) live on the same income, the chances of postpartum women having low self-efficacy increases.

According to the behavioral data of the mothers, there was a statistically significant asso-

ciation between breastfeeding self-efficacy and having two or more children (p=0.009), having had previous (p= 0.018) positive breastfeeding experience (<0.001), and five to six months' exclusive breastfeeding (p=0.002). In addition, it was shown that the fact that women have only one more child, without having previously breastfed or having done it for a period shorter than five months, along with a negative breastfeeding experience, increase the chances of them presenting reduced self-efficacy as can be seen in Table 2.

**Table 1** - Distribution number of puerperal women according to self-efficacy in nursing and socio-demographic variables. Santa Maria, 2012.

| Variables  | Self-efficacy  |              | OR  | IC 95%  | p*    |
|--|----------------|--------------|-----|---------|-------|
|  | Average (n=61) | High (n=261) |     |         |       |
| <b>Age</b>                                       |                |              |     |         |       |
| 20-34  | 37 (16,8%)     | 183 (83,2%)  | 1   |         |       |
| 13-19  | 14 (25,9%)     | 40 (74,1%)   | 1,7 | 0,9 3,5 | 0,123 |
| 35-46  | 10 (20,8%)     | 38 (79,2%)   | 1,3 | 0,6 2,8 | 0,507 |
| <b>Marital Status</b>                            |                |              |     |         |       |
| Married / Stable Union                           | 22 (20,2%)     | 87 (79,8%)   | 1   |         |       |
| Single   | 39 (18,3%)     | 174 (81,7%)  | 0,9 | 0,5 1,6 |       |
| <b>Education</b>                                 |                |              |     |         |       |
| Complete High School to Post Graduation          | 21 (21,4%)     | 77 (78,6%)   | 1,4 | 0,7 2,7 | 0,361 |
| Incomplete Elementary School                     | 19 (16,5%)     | 96 (83,5%)   | 1   |         |       |
| Full Elementary School to High Incomplete School | 21 (19,3%)     | 88 (80,7%)   | 1,2 | 0,6 2,4 | 0,592 |
| <b>Income (Minimum Wage)</b>                     |                |              |     |         |       |
| > 3  | 5 (18,5%)      | 22 (81,5%)   | 1,5 | 0,4 5,1 | 0,553 |
| < 1  | 7 (13,5%)      | 45 (86,5%)   | 1   |         |       |
| 01/mar   | 49 (20,2%)     | 194 (79,8%)  | 1,6 | 0,7 3,8 | 0,263 |
| <b>Number of persons living with the income</b>  |                |              |     |         |       |
| 1 to 3 people                                    | 48 (22,9%)     | 162 (77,1%)  | 1   |         |       |
| 4 people or more                                 | 13 (11,6%)     | 99 (88,4%)   | 2,3 | 1,2 4,4 |       |
| <b>Work</b>                                      |                |              |     |         |       |
| No   | 42 (19,4%)     | 174 (80,6%)  | 1   |         |       |
| Yes  | 19 (17,9%)     | 87 (82,1%)   | 0,9 | 0,5 1,6 |       |
| <b>Smoker</b>                                    |                |              |     |         |       |
| No   | 27 (16,7%)     | 135 (83,3%)  | 1   |         |       |
| Yes  | 34 (21,2%)     | 126 (78,8%)  | 1,3 | 0,8 2,4 |       |
| <b>Use of alcohol</b>                            |                |              |     |         |       |
| No   | 40 (19,8%)     | 162 (80,2%)  | 1   |         |       |
| Yes  | 21 (17,5%)     | 99 (82,5%)   | 0,8 | 0,5 1,5 |       |

\*p de P2;

Minimum Wage R\$622,00 - Brazil, 2012.

Source: authors

**Table 2** - Distribution of the number of puerperal women according to self-efficacy in nursing and behavioral variables. Santa Maria, 2012.

| Variables                                 | self-efficacy  |              | OR   | IC 95% | p[1]             |
|---|----------------|--------------|------|--------|------------------|
|   | Average (n=61) | High (n=261) |      |        |                  |
| <b>Have other children</b>                |                |              |      |        | <b>0,643</b>     |
| Yes                                       | 39 (18,2%)     | 175 (81,8%)  | 1    |        |                  |
| No  | 22 (20,4%)     | 86 (79,6%)   | 1,1  | 0,6    | 2,1              |
| <b>How many previous children</b>         |                |              |      |        | <b>0,009</b>     |
| Two or more children                      | 13 (11,6%)     | 99 (88,4%)   | 1    |        |                  |
| One child                                 | 26 (25,5%)     | 76 (74,5%)   | 2,6  | 1,2    | 5,4              |
| <b>Breastfeeding experience</b>           |                |              |      |        | <b>0,018</b>     |
| Yes                                       | 32 (16,3%)     | 164 (83,7%)  | 1    |        |                  |
| No  | 7 (38,9%)      | 11 (61,1%)   | 3,3  | 1,2    | 9                |
| <b>Exclusively breastfed for how long</b> |                |              |      |        | <b>0,002</b>     |
| Five to six months                        | 5 (5,6%)       | 85 (94,4%)   | 1    |        |                  |
| Less than five months                     | 11 (23,9%)     | 35 (76,1%)   | 5,3  | 1,7    | 16,5             |
| <b>Did you like breastfeeding</b>         |                |              |      |        | <b>&lt;0,001</b> |
| Yes                                       | 26(13,8%)      | 162 (86,2%)  | 1    |        |                  |
| No  | 6 (75,0%)      | 2 (25,%)     | 18,7 | 3,6    | 97,6             |

\*p de P2

Source: authors

## DISCUSSION

It was found that the mothers had high and average breastfeeding self-efficacy, indicating that they feel confident to breastfeed the child. Women with high self-efficacy are more likely to breastfeed for at least six months<sup>(13)</sup>, demonstrating the positive influence that self-efficacy can have in continuing BF. Thus, the BSES-SF is a tool that can be clinically used to identify women with breastfeeding premature interruption risk and in need of some intervention in order to prevent early weaning<sup>(14)</sup>.

Regarding the age of the mothers participating in the present study, the odds ratio indicated that women aged 20 or older were more likely to have higher breastfeeding self-efficacy than the younger ones. This is corroborated by another study which found this association (p=0.006), showing a directly proportional relationship between the variables<sup>(11)</sup>, which probably indicates that being an adolescent mother or becoming a mother shortly after this phase

can be considered a risk factor in terms of self-efficacy, and consequently of weaning.

The findings also showed no significant association between per capita income and breastfeeding self-efficacy. The same result was found in studies carried out in England and Brazil, which did not identify such statistical difference either<sup>(10,15-16)</sup>. However, in Turkey there was a statistically significant difference between these variables (p=0.001), suggesting that low-income mothers are vulnerable to poor outcomes in terms of breastfeeding due to decreased self-efficacy<sup>(12)</sup>.

Despite the income results, there was no statistically significant association between mothers' work and breastfeeding self-efficacy, corroborating another survey conducted in Brazil<sup>(11)</sup>. In England, a study indicated that the moment to return to work may be related to the duration of breastfeeding, because when this event occurs six months after delivery, the weaning risk increased compared with those mothers who remained at home<sup>(15)</sup>. It is noteworthy that

maternity leave does not always last six months; in the case of Brazil, public and private institutions provide this benefit. Thus, self-efficacy may be reduced even before that time for the women who cannot avail this benefit, which may lead to very early weaning.

The fact that mothers have two or more children showed statistically significant association with self-efficacy, and the greater the number of children, the greater the chances of higher breastfeeding self-efficacy. Studies in Spain and the United Kingdom found the same positive correlation, since women with more children had higher scores on the scale than primiparous mothers<sup>(14,17)</sup>. Thus, parity may have an effect on breastfeeding of the subsequent children, especially when the previous BF experience is positive<sup>(10)</sup>.

In the context of self-efficacy, people absorb much of their knowledge directly from the experience obtained by the effects of their own actions. Thus, the main way to develop a strong sense of self-efficacy is through mastery experiences; that is, the successes achieved build a strong belief in their self-efficacy and, on the other hand, the failures decrease it<sup>(8)</sup>. Therefore, if people believe in their own ability to overcome challenges, there is a motivation for the effort and achievement of necessary actions to overcome these challenges<sup>(18)</sup>.

This fact converges with the results found in this study, where the previous experience of having breastfed the child and having done it exclusively up to six months showed statistically significant association with self-efficacy. Similar results were found in studies in Turkey and England, both using the BSES-SF<sup>(12,15)</sup>.

In agreement with these studies, in Spain and Portugal the BSES-SF score for women with previous experience was significantly higher than those for women who did not have such a practice<sup>(17,19)</sup>. This means that the experience of

breastfeeding showed a tendency to strengthen the intention to continue breastfeeding for six months or more<sup>(13)</sup>.

In this sense, the fact that the mothers had a positive breastfeeding experience with previous children, configured in the study by the fact that they enjoyed breastfeeding, is an element that provides high self-efficacy. From this personal experience, it is understood that barely knowing the behaviors necessary for obtaining certain result is not enough to promote this behavior; people should also believe that they are effective in performing them. Thus, if individuals believe that they can perform an action, mainly due to previous experiences, they will be more relaxed doing it and will feel more confident<sup>(8)</sup>.

Thus, as people perform certain actions, they interpret the results of their actions and use these interpretations to develop confidence in terms of their ability to perform such actions in a subsequent manner, thus acting in accordance with the trust established<sup>(8)</sup>. Therefore, we note in this study that mothers are more likely to present a higher self-efficacy, because besides the BSES-SF levels, they demonstrated experience and behaviors previously performed that favored this finding.

## CONCLUSIONS

The study showed that there is a significant relationship between maternal self-efficacy and the number of people who live on the family income, who do not use drugs, who have two or more children, who breastfeed exclusively during the period of five to six months, in addition to the fact that this is a positive experience. Thus, it is necessary that professionals consider self-efficacy in their professional context, as it establishes interactions with the characteristics of mothers, with their knowledge, with their beliefs

and health behaviors, significantly influencing breastfeeding.

As much as all the pregnant women have presented mean and high breastfeeding self-efficacy, this does not mean that they will not have difficulties; therefore, health professionals need to monitor women and their children throughout the BF period. Moreover educational strategies aimed at EBF and reducing early weaning should be promoted in order to empower these women.

Regarding behavioral variables, these need to be identified prenatally, since they may have a negative effect on breastfeeding and its self-efficacy. In this sense, it is appropriate to deepen these issues and other questions addressed in the study, by means of longitudinal surveys and the expansion of the population so that this can indicate the influence of certain characteristics in terms of breastfeeding self-efficacy.

## REFERENCES

1. Venâncio SI, Escuder MML, Saldiva SRDM, Giugliani ERJ. Breastfeeding practice in the Brazilian capital cities and the Federal District: current status and advances. *J Pediatr (Rio J)* [internet]. 2010 Aug [Cited 2014 Sep 28]; 86(4):317-24. Available from: <http://www.jped.com.br/conteudo/10-86-04-317/port.pdf>
2. United Nations Children's Fund (UNICEF). The state of the world's children: maternal and newborn health. 2009.
3. Martins EJ, Giugliani ERJ. Which women breastfed for 2 years or more? *J Pediatr (Rio J)* [internet]. 2012 [Cited 2014 Sep 28]; 88(1):67-73. Available from: [http://www.scielo.br/pdf/jped/v88n1/en\\_a11v88n01.pdf](http://www.scielo.br/pdf/jped/v88n1/en_a11v88n01.pdf)
4. Silvestre PK, Carvalhaes MABL, Venâncio SI, Tone VLP, Parada CMGL. Breastfeeding knowledge and practice of health professionals in public health care services. *Rev Latino-am Enfermagem* [internet]. 2009 Nov-Dec [Cited 2014 Sep 28] 17(6):953-60. Available from: <http://www.scielo.br/pdf/rlae/v17n6/05.pdf>
5. Souza MHN, Souza IEO, Tocantins FR. The use of social network methodological framework in nursing care to breastfeeding women. *Rev Latino-am Enfermagem* [internet]. 2009 May-Jun [Cited 2014 Sep 30]; 17(3):354-60. Available from: <http://www.scielo.br/pdf/rlae/v17n3/12.pdf>
6. Dennis CL. The Breastfeeding Self-Efficacy Scale: Psychometric Assessment of the Short Form. *JOGNN*. 2003;32(6):734-744.
7. Oriá MOB, Ximenes LB. Tradução e adaptação cultural da Breastfeeding Self-Efficacy Scale para o português. *Acta Paul Enferm* [internet]. 2010 [Cited 2014 Sep 30]; 23(2):230-8. Available from: [http://www.scielo.br/pdf/ape/v23n2/en\\_13.pdf](http://www.scielo.br/pdf/ape/v23n2/en_13.pdf)
8. Azzi RG. *Introdução à Teoria Social Cognitiva*. São Paulo: Caso do Psicólogo; 2014. 136 p.
9. Brasil. *Estatuto da Criança e do Adolescente*. 12. ed. Brasília: Câmara dos Deputados; 2012. 241 p.
10. Dodt RCM, Ximenes LB, Almeida PC, Oriá MOB, Dennis CL. Psychometric and maternal sociodemographic assessment of the breastfeeding self-efficacy scale - short form in a Brazilian sample. *Journal of Nursing Education and Practice* [internet]. 2012 Aug [Cited 2014 Oct 01]; 2(3):66-73. Available from: <http://www.sciedu.ca/journal/index.php/jnep/article/view/627/553>
11. Tavares MC, Aires JS, Dodt RCM, Joventino ES, Oriá MOB, Ximenes LB. Application of Breastfeeding Self-Efficacy Scale-Short Form to postpartum women in rooming-in care: a descriptive study. *Online Braz J Nurs (online)* [internet]. 2010 [Cited 2014 Oct 02]; 9(1). Available from: <http://www.objnursing.uff.br/index.php/nursing/article/view/j.1676-4285.2010.2717/599>
12. Tokat MA, Okumuş H, Dennis CL. Translation and psychometric assessment of the Breastfeeding Self-Efficacy Scale – Short Form among pregnant and postpartum women in Turkey. *Midwifery* [internet]. 2010 [Cited 2014 Oct 02]; 26:101-8. Available from: [http://www.midwiferyjournal.com/article/S0266-6138\(08\)00043-0/pdf](http://www.midwiferyjournal.com/article/S0266-6138(08)00043-0/pdf)
13. Wilhelm S, Rodehorst-Weber TK, Stepan MBF, Hertzog M. The relationship between breastfeeding test weights and postpartum breastfeeding rates. *J Hum Lact*. 2010;26(2):168-174.
14. Gregory A, Penrose K, Morrison C, Dennis CL, MacArthur C. Psychometric Properties of the Breastfeeding Self-Efficacy Scale-Short Form in

Rodrigues AP, Padoin SMM, Paula CC, Souza IEO, Almeida PC, Ximenes LB. Influence of sociodemographic and behavioral conditions on self-efficacy in breastfeeding: a cross-sectional study. *Online braz j nurs* [internet] 2015 Sept [cited year month day]; 14 (3):324-31. Available from: <http://www.objnursing.uff.br/index.php/nursing/article/view/5145>

- an Ethnically Diverse U.K. Sample. *Public Health Nursing*. 2008;25(3):278-284.
15. McCarter-Spaulding D, Gore R. Breastfeeding Self-Efficacy in Women of African Descent. *JOG-NN*. 2009;38(2):230-243.
  16. Zubaran C, Foresti K, Schumacher M, Thorell MR, Amoretti A, Müller L, et al. The Portuguese Version of the Breastfeeding Self-Efficacy Scale-Short Form. *J Hum Lact* 2010; 26(3):297-303.
  17. Coudray MLR, Osuna CL, Rayo MD, Martínez MR, Roig AO. Fiabilidad y validez de la versión española de una escala de autoeficacia en la lactancia materna. *Matronas Prof* [internet]. 2011 [Cited 2014 Oct 04]; 12(1):3-8. Available from: <http://www.federacion-matronas.org/revista/matronas-profesion/sumarios/i/15845/173/fiabilidad-y-validez-de-la-version-espanola-de-una-escala-de-autoeficacia-en-la-lactancia-materna>
  18. Hurtado DSM, Nascimento LC. Autoeficacia y actitud hacia el consumo de drogas en la infancia: explorando los conceptos. *Rev Latino-am Enfermagem* [internet]. 2010 May-Jun [Cited 2014 Oct 05]; 18(spec):655-62. Available from: <http://www.scielo.br/pdf/rlae/v18nspe/a24v18nspe.pdf>
  19. Santos V, Bácia S. Contributo para a adaptação transcultural e validação da Breastfeeding Self-Efficacy Scale – Short Form – versão portuguesa. *Rev Port Clin Geral* [internet]. 2009 [Cited 2014 Oct 06]; 25:363-9. Available from: <http://www.rpmgf.pt/ojs/index.php?journal=rpmgf&page=article&op=view&path%5B%5D=10633&path%5B%5D=10369>

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All authors participated in the phases of this publication in one or more of the following steps, in According to the recommendations of the International Committee of Medical Journal Editors (ICMJE, 2013): (a) substantial involvement in the planning or preparation of the manuscript or in the collection, analysis or interpretation of data; (b) preparation of the manuscript or conducting critical revision of intellectual content; (c) approval of the versión submitted of this manuscript. All authors declare for the appropriate purposes that the responsibilities related to all aspects of the manuscript submitted to OBJN are yours. They ensure that issues related to the accuracy or integrity of any part of the article were properly investigated and resolved. Therefore, they exempt the OBJN of any participation whatsoever in any imbroglios concerning the content under consideration. All authors declare that they have no conflict of interest of financial or personal nature concerning this manuscript which may influence the writing and/or interpretation of the findings. This statement has been digitally signed by all authors as recommended by the ICMJE, whose model is available in [http://www.objnursing.uff.br/normas/DUDE\\_eng\\_13-06-2013.pdf](http://www.objnursing.uff.br/normas/DUDE_eng_13-06-2013.pdf)

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**Received:** 03/02/2015

**Revised:** 08/31/2015

**Approved:** 08/31/2015