ORIGINAL RESEARCH

Psychometric and maternal sociodemographic assessment of the breastfeeding self-efficacy scale - short form in a brazilian sample

Regina Cláudia Melo Dodt[1], Lorena Barbosa Ximenes[2], Paulo Cesar Almeida[3], Mônica Oliveira Batista Oriá[2], Cindy-Lee Dennis[4]

1. Assis Chateaubriand School, Maternity, Brazil. 2. Nursing Department, Federal University of Ceara, Brazil. 3. State University of Ceara, Brazil. 4. Faculty of Nursing, University of Toronto, Canada

Abstract

Objectives: This study was developed to psychometrically assess the Breastfeeding Self-Efficacy Scale-Short Form (BSES-SF) among women living in Fortaleza-CE-Brazil and to examine the relationship between breastfeeding self-efficacy and maternal demographic variables.

Methods: This methodological study replicated the original psychometric assessment of the BSES-SF conducted in Canada. A convenience sample of 294 postpartum women were recruited.

Results: The Cronbach's alpha coefficient for the BSES-SF was 0.74. Significant relationship was found between breastfeeding self-efficacy and maternal age (r=0.138; p=0.018). No relationship was found between breastfeeding self-efficacy and maternal occupation, educational level, marital status, family income or number of pregnancy suggesting BSES-SF may be a unique tool to identifying women at risk to prematurely discontinue breastfeeding.

Conclusions: The BSES-SF is a valid, instrument for measuring Brazilian women's confidence in their ability to breastfeed. Study results can be used by health workers to plan interventions targeting women in most need of support to reduce premature discontinuation.

Key words

Self efficacy, Breast feeding, Nursing

1 Introduction

According to the United Nations Children's Fund (UNICEF), breast milk is the baby's 'first immunization' that helps to protect against causes of diarrhoea, ear and chest infections, and other health problems. Exclusive breastfeeding on demand for the first six months, timely introduction of safe and nutritious complementary foods at the age of six months, and continued breastfeeding for two years or beyond provide the child with nutrition and health benefits as well as affection and contact with the caregiver'' [1]. Despite this strong endorsement to encourage breastfeeding, many women around the world discontinue breastfeeding before the recommended 6 months postpartum [2].

The Brazilian government established the National Breastfeeding Program in 1981, which includes nationwide health worker engagement and multimedia marketing. Since the program was initiated, total breastfeeding duration rates among Brazilian mothers have increased from 10 weeks in 1975 to 30 weeks in 1996 [3]. Despite these gains, only 7.7% of Brazilian women today exclusively breastfeed their infants to 6 months. In Fortaleza, Ceará´s capital in Northeast Brazil and one of the poorest regions in Brazil, 73.4% of women breastfeed (not only exclusively) their infants during the first month postpartum, decreasing to 10.2% at 6 months [4].

Research by the Brazilian Ministry of Health involving 34,366 women of all Brazilian state capitals and the country's capital identified an increased prevalence of breastfeeding in children younger than 4 months, from 35.5% in 1999 to 51.2% in 2008. In Pernambuco (one northeast state) the median duration of total breastfeeding rose from 89 days (1991) to 183 days (2006), although the median duration of exclusive breastfeeding remained around 30 days between 1997 and 2006 [5]. The comparison between the areas shows more significant increases in the Southeast, North and Midwest. Smaller increases are seen in the northeast, where the lowest number was found in Fortaleza [6].

Fortaleza is endemic for diarrhoeal diseases and malnutrition, and early discontinuation of breastfeeding in this area has led to large numbers of enteric illnesses and malnutrition cases that could have a lasting effect on a child's development [7]. This fact reinforces the usefulness of the Breastfeeding Self-Efficacy Scale (BSES) for breastfeeding promotion as a strategy to reduce child morbidity and mortality.

2 Purpose

The purpose of this study was (1) to psychometrically assess the BSES-SF among women living in Fortaleza-CE, northeast-Brazil and (2) to examine the relationship between breastfeeding self-efficacy and maternal demographic variables.

3 Conceptual framework

The Breastfeeding Self-Efficacy Scale [8] is an important instrument to identify mother's confidence in her ability to breastfeed her infant. This scale has 33-items based on social cognitive theory, developed to measure breastfeeding confidence. Following Self-Efficacy Theory's recommendations [9], all items are presented positively and scores are summed to produce a final score ranging from 33 to 165, with higher scores indicating higher breastfeeding self-efficacy. The initial psychometric assessment was conducted on a convenience sample of 130 Canadian breastfeeding women. The Cronbach's alpha coefficient was .96, and support for predictive validity was demonstrated through positive correlations between BSES scores and infant-feeding practices at 6 weeks postpartum [10]. The translation to Portuguese and psychometric assessment of the full BSES, which was coordinated by a Brazilian nurse research team in the northeast Brazil, is presented elsewhere [11, 12].

Although initial support for the validity and reliability of the BSES was achieved, internal consistency statistics and factor loadings suggested a need for item reduction. Subsequently the scale was refined and psychometrically assessed to reach the shortened version - BSES-Short Form (BSES-SF) [13, 14]. The BSES-SF [14] is a 14-item instrument developed to measure breastfeeding confidence. All items are preceded by the statement ''I can always'' and are anchored by a 5-point Likert-type scale, with 1=not at all confident and 5=always confident. All items are presented positively and scores are summed to produce a final score ranging from 14 to 70, with higher scores indicating better breastfeeding self-efficacy. The psychometric assessment was conducted on a population-based sample of 491 breastfeeding women. The Cronbach's alpha coefficient for BSES-SF was .94, with a scale mean of 55.88 (SD=10.85) [14].

The BSES-SF has been used in other countries [14, 15]. These studies provide preliminary evidence that the BSES-SF may be an internationally applicable, reliable, and valid measure to assist health professionals in caring for breastfeeding women. In non-English speaking areas, health professionals would benefit from having a translated version of the scale.

4 Methods

4.1 Research design

This methodological study administered the Portuguese version of Breastfeeding Self-Efficacy Scale-Short Form (BSES-SF), translated and cross-culturally adapted by our group [16], and then examined its reliability and validity.

4.2 Subjects and setting

Following Federal University of Ceará ethical approval, in-hospital postpartum low-income women were approached by a research assistant at a large teaching university hospital in Fortaleza, Ceará, Brazil and provided them with a detailed study explanation. Participants were recruited between August and October 2007.

All eligible participants were postpartum women who (a) intended to breastfeed, and (b) were at least 12 years old. Participants were excluded if they had an existed attribute that could significantly interfere with breastfeeding (e.g., infant had a cleft palate). After screening, 299 potentially eligible women were approached; five refused to participate, resulting in a convenience sample of 294 postpartum women (acceptance rate was 98.9%). This sample size (n=294) provided 21 participants per item, which is more than the minimum required for psychometric testing [17].

4.3 Data collection procedures

Following informed consent, the translated BSES-SF and demographic questionnaire were administered by a research assistant before hospital discharge.

4.4 Data analysis

Data analysis included descriptive, Pearson´s correlations, internal consistency and factor analysis. Descriptive statistics were used to describe the subjects and mean scores of the major variables. Pearson´s correlations were calculated to explore correlations among the variables. Internal consistency was calculated by Cronbach´s alpha. The construct validity was assessed using factor analysis and association with sociodemographic variables. Data were analyzed using SPSS (version 18 for windows). Significance was set at $p < 0.05$.

5 Results

5.1 Sample characteristics

The mean age was 23.9 years (SD=±6.10), ranging from 12 to 44 years; 17.3 % (n=51) were under 19 years old (between 12 and 18 years old); 80% (n = 235) were married, including common-law. The mean educational level was 9.7 (SD= ±3.0) years, with 50.6% (n=149) of women having eleven or more years of schooling (to complete the high school in Brazil 12 years of study are necessary); 31.2% (n= 93) were housewives. Seventy-six percent reported a family income between $2,280 and $4,560 (US dollars/year); 203 (69%) women had four or more people living at the same house. Approximately half (n=168, 57.1%) were multipara women and 41.2% (n=119) of these mothers had previous breastfeeding experience. Two-hundred-forty-two (82.1%) women intended to breastfeed for 6 months or more.

5.2 Reliability: Internal consistency

Consistent with previous methodological studies with the BSES-SF [14, 15], the reliability of the translated BSES-SF was evaluated by considering the following: (a) Cronbach's alpha coefficient, (b) a corrected item-total correlation coefficient, (c) the alpha estimate when an item was dropped from the scale and (d) intraclass correlation coefficient. Poorly functioning items were defined as (a) items that when deleted increased the coefficient alpha by more than 0.10, or (b) items that had a correlation of less than 0.30 with the total scale score (corrected item-to-total correlation). The

Cronbach's alpha coefficient for the translated BSES-SF was 0.74, and did not increase by more than 0.10 if any item was deleted. All corrected item-total correlations were positive and 78.6% of the items were more than 0.30. The Cronbach's alpha estimated when an item was dropped from the scale range from 0.71 to 0.74. The intraclass correlation coefficient for translated BSES-SF ranged from 0.69 to 0.78 with a mean of 0.74.

5.3 Construct validity

The translated BSES-SF was assessed for construct validity using factor analysis and association with sociodemographic variables. These methods were used in the original BSES-SF methodological studies and thus the results will be used for comparisons [8, 14]. Exploratory factor analysis was conducted to evaluate the strength of the relationship of individual BSES-SF items with the theoretical concepts and to determine the plausible underlying structures of the BSES-SF. The suitability of the data for factor analysis was verified by a Kaiser-Meyer-Oklin coefficient of 0.80, exceeding the recommended value of 0.60 [10, 18]. The Bartlett's Test of Sphericity reached statistical significance (p=0.001), further supporting the factorability of the correlation matrix [19].

Table 1. BSES Items with Principal Components Varimax Factor Loadings. Fortaleza, Brazil, Aug/Oct, 2007

Items	Loadings
1 - Eu sempre sinto quando o meu bebê está mamando o suficiente. **Determine that my baby is getting enough breast milk.**	.718
2 - Eu sempre lido com a amamentação com sucesso, da mesma forma que eu lido com outros desafios. **Successfully cope with breastfeeding like I have with other challenging tasks.**	.492
3 - Eu sempre alimento o meu bebê sem usar leite em pó como suplemento. **Breastfeed my baby without using formula as a supplement.**	.467
4 - Eu sempre percebo se o meu bebê está pegando o peito direitinho durante toda a mamada. **Ensure that my baby is properly latched for the whole feeding.**	.466
5 - Eu sempre lido com a amamentação de forma a me satisfazer. **Manage the breastfeeding situation to my satisfaction.**	.516
6 - Eu sempre posso amamentar mesmo se o meu bebê estiver chorando. **Manage to breastfeed even if my baby is crying.**	.588
7 - Eu sempre sinto vontade de continuar amamentando. **Keep wanting to breastfeed.**	.660
8 - Eu sempre posso dar de mamar confortavelmente na frente de pessoas da minha família. **Comfortably breastfeed with my family members present.**	.374
9 - Eu sempre fico satisfeita com a minha experiência de amamentar. **Be satisfied with my breastfeeding experience.**	.571
10 - Eu sempre posso lidar com o fato de que amamentar exige tempo. **Deal with the fact that breastfeeding is time consuming.**	.539
11 - Eu sempre amamento meu bebê em um peito depois mudo para o outro. **Finish feeding my baby on one breast before switching to the other breast.**	.514
12 - Eu sempre continuo amamentando meu bebê a cada alimentação dele. **Continue to breastfeed my baby for every feeding.**	.587
13 - Eu sempre consigo adequar as minhas necessidades às necessidades do bebê . **Manage to keep up with my baby's breastfeeding demands.**	.547
14 - Eu sempre sei quando o meu bebê terminou a mamada. **Tell when my baby is finished breastfeeding.**	.514
Eigenvalues	7.511
Variance	50.8

Note. The stem for each item is "Eu sempre…" (I always…).

Principal components analysis was chosen to be consistent with the original BSES-SF methodological studies and because it reveals a probable number and nature of factors [20]. This specific analysis yielded a 4-factor solution with eigenvalues

greater than one in the unrotated matrix that explained 50.75% of the variance. To promote a more parsimonious and interpretable factor solution, a principal components extraction with varimax rotation (orthogonal) was performed. Based on a screen test and to replicate the original analysis [14], a one-factor solution was requested (see Table 1). All factors loading exceed 0.32 (see Table 1) which is recommended for item retention [20], indicating that BSES-SF items are acceptable measure of breastfeeding self-efficacy.

Differences in breastfeeding self-efficacy were assessed in relation to maternal demographic variables to determine if the BSES-SF was a unique identifier of high-risk breastfeeding mothers. Significant relationships were found between postpartum breastfeeding self-efficacy with previous experience to breastfeed (r=0.129; p= 0.027), previous breastfeeding duration (r= 0.153; p= 0.009), different shapes and sizes of nipple (r= 0.129; p=0.027) and whether the mother practiced skin-to-skin contact with their infants immediately following delivery (r=0.138; p=0.18). Although significant correlations were found, Pearson's coefficient values are low, suggesting that other confounding factors account for these findings. No significant correlation was found for breastfeeding self-efficacy with maternal occupation (r= 0.092; p= 0.116), family income (r= 0.063; p= 0.284), smoking practice (r= 0.021; p= 0.719), number of pregnancies (r= 0.089; p= 0.129), marital status (r= 0.029; p= 0.624), schooling (r= 0.031; p= 0.592).

6 Discussion

6.1 Psychometric properties

The results from this methodological study are consistent with the original BSES-SF study of Dennis et al [14] and provide evidence that the BSES-SF is a reliable measure of breastfeeding self-efficacy among a representative sample of Brazilian women in Fortaleza, Ceará, Brazil. The Cronbach's alpha was 0.74, exceeding the recommendations for established instruments [21]. Although Cronbach's alpha was lower than in the Polish, 0.89 [15]; Turkish, 0.87 [22]; Chinese, 0.93 [23], and the United States [24], 0.94, studies, we have confirmed its reliability using the intra-class correlation coefficient that ranged from 0.69 to 0.78 (p = 0.0001) with a mean of 0.74.

6.2 Maternal demographic factor

Maternal demographic factors play a broad role on breastfeeding behaviour, with improvements seen with better schooling and previous breastfeeding experience [13, 22, 25]. This study found a significant correlation between BSES-SF scores and maternal age, which is consistent with previous reports that young maternal age adversely affects breastfeeding outcomes [26]. Interestingly, in our study, the rates of teenage pregnancy (age: 10-18 years old) was found to be 17%, that is near the official rates. Recent data from the Brazilian Health Ministry report that the number of teenager delivery to be 25% nationally, 26.4% in Ceará state, and 21% in Fortaleza, in 2006 [27].

Our findings contradict the results of another study conducted in south Brazil [28], which did not find associations between BSES-SF scores and maternal age. On the other hand, identified associations between self-efficacy scores and marital status (p=0.007), finding that was not seen in our study [28]. This might be due to social and cultural differences between the south and northeast Brazil context. Brazil is a country of continental size and marked by great disparities related to population welfare. Based on income, education, and access to healthcare, the south and southeast regions have the best indicators while the north and northeast are the poorest regions of the country [29]. These regional socio-demographic characteristics may have contributed to these differences [30]. More studies are warranted to investigate these findings in more depth.

Significant correlations were found with previous experience to breastfeeding, previous breastfeeding duration, and nipple type. Several studies indicate that parity and previous experience to breastfeeding have influenced the breastfeeding status for subsequent children [26, 31]. This was especially true when a previous positive experience, with prolonged breastfeeding afterwards [12]. An important correlation was found when the baby is in skin-to-skin contact with their mothers

immediately after birth, which is consistent with the fourth step to successful breastfeeding of the Baby-friendly Hospital Initiative (BFHI) [32]. Significant associations with other maternal variables were not found, namely number of pregnancies, education level, and family income.

Launched by WHO [33], and UNICEF in 1991, BFHI was inspired in Innocenti Declaration of 1990. The initiative is a global effort to implement practices that protect, promote and support breastfeeding to ensure that all maternities, become centres of breastfeeding support. To be designated as 'baby-friendly' it is necessary to refuse free or low-cost breast milk substitutes, feeding bottles or teats, and have implemented "10 steps to support successful breastfeeding". In Brazil, currently we have 335 institutions accredited with the title Baby-friendly Hospital Initiative (BFHI), 145 of these are located in the northeast and 35 in the state of Ceará.

Improving maternal willingness perinatally to perform a lasting infant feeding with her breast milk is key for the success of this program. The BSES-SF may be an important instrument in these settings to foster breastfeeding awareness as early as post-partum.

7 Limitations

Although our data suggest that the BSES-SF is a unique tool to identify women at risk to prematurely discontinue breastfeeding, our study has some limitations, including the inability to follow-up the baby's feeding and therefore to measure the predictive validity. This was due to population heterogeneity attending the hospital where the study was conducted, including women coming from all regions of Fortaleza and other northeast cities.

Further research is warranted to determine if health professionals can increase breastfeeding self-efficacy to improve breastfeeding outcomes among those scoring low on the BSES-SF.

8 Conclusions

The BSES-SF is a psychometrically valid instrument to assist health professionals in identifying women with low breastfeeding self-efficacy and thus possibly at risk to prematurely discontinue breastfeeding. This study revealed consistent data about maternal breastfeeding confidence in a population residing in Fortaleza, Ceará (northeast of Brazil). Our findings may be useful in identifying those women at risk of stopping breastfeeding, and in need for early interventions. The overall goal of implementing the BSES-SF, as a research instrument in public health, is to increase women's awareness and confidence toward a better nutritional care for their babies, therefore potentially reducing diarrhoea-based morbidity and improving weaning rates.

Source(s) of support

Conflicting interest

No conflicts

References

[1] United Nations Children's Fund (UNICEF). Facts for life. New York: UNICEF; 2002.
[2] Imdad A, Yakoob MY, Bhutta ZA. Effect of breastfeeding promotion interventions on breastfeeding rates, with special focus on developing countries. BMC Public Health. 2011 Apr 13; 11 Suppl 3: S24. PMid:21501442
     http://dx.doi.org/10.1186/1471-2458-11-S3-S24

[3]   Marques NM, Lira PI, Lima MC, Silva NL, Filho MB, Huttly SR, et al. Breastfeeding and early weaning practices in northeast Brazil: a longitudinal study. Pediatrics. 2001; 108: 66. PMid:11581474 http://dx.doi.org/10.1542/peds.108.4.e66

[4]   Sena MC, Silva EF, Pereira MG. Prevalence of breastfeeding in Brazilian capital cities. Rev Assoc Med Bras. 2007; 53: 520-524. http://dx.doi.org/10.1590/S0104-42302007000600020

[5]   Caminha MFC, Batista Filho M, Serva VB, Arruda IKG, Figueiroa JN, Lira PIC. Tendências temporais e fatores associados à duração do aleitamento materno em Pernambuco. Rev Saúde Pública. 2010; 44: 240-248. http://dx.doi.org/10.1590/S0034-89102010000200003

[6]   Ministério da Saúde (BR). Secretaria de Atenção à Saúde. Departamento de Ações Programáticas e Estratégicas. Pesquisa de Prevalência de Aleitamento Materno em Municípios Brasileiros /Ministério da Saúde, Secretaria de Atenção à Saúde, Departamento de Ações Programáticas e Estratégicas. Brasília: Ministério da Saúde; 2010.

[7]   Lima AA, Moore SR, Barboza MS, Jr Soares AM, Schleupner MA, Newman RD, et al. Persistent diarrhea signals a critical period of increased diarrhea burdens and nutritional shortfalls: a prospective cohort study among children in northeastern Brazil. J Infec Dis. 2000; 181: 1643-1651. PMid:10823764 http://dx.doi.org/10.1086/315423

[8]   Dennis CL, Faux S. Development and psychometric testing of the Breastfeeding Self-Efficacy Scale. Res Nurs Health. 1999; 22: 399-409. http://dx.doi.org/10.1002/(SICI)1098-240X(199910)22:5<399::AID-NUR6>3.0.CO;2-4

[9]   Bandura A, Adams NE, Beyer J. Cognitive processes mediating behavioral change. J Pers Soc Psychol. 1977; 35: 125-139. PMid:15093 http://dx.doi.org/10.1037/0022-3514.35.3.125

[10] Kaiser H. A second generation Little Jiffy. Psychometrika. 1970; 35: 401-415. http://dx.doi.org/10.1007/BF02291817

[11] Oriá MOB, Ximenes LB, Almeida PC, Glick DF, Dennis CL. Psychometric Assessment of the Brazilian Version of the Breastfeeding Self-Efficacy Scale. Public Health Nurs. 2009; 26: 574-583. PMid:19903278 http://dx.doi.org/10.1111/j.1525-1446.2009.00817.x

[12] Oriá MOB, Ximenes LB. Translation and cultural adaptation of the Breastfeeding Self-Efficacy Scale into Portuguese. Acta Paul Enferm. 2010; 23: 230-238. ttp://dx.doi.org/10.1590/S0103-21002010000200013

[13] Dennis CL. Breastfeeding initiation and duration: a 1990-2000 literature review. J Obstet Gynecol Neonatal Nurs. 2002; 31: 12-32. http://dx.doi.org/10.1111/j.1552-6909.2002.tb00019.x

[14] Dennis CL. The breastfeeding self-efficacy scale: psychometric assessment of the short form. J Obstet Gynecol Neonatal Nurs. 2003; 32: 734-744. PMid:14649593 http://dx.doi.org/10.1177/0884217503258459

[15] Wutke K, Dennis CL. The reliability and validity of the Polish version of the Breastfeeding Self-Efficacy Scale-Short Form: translation and psychometric assessment. Int J Nurs Stud. 2007; 44: 1439-1446. PMid:16982056 http://dx.doi.org/10.1016/j.ijnurstu.2006.08.001

[16] Dodt, RCM. Application and Validation of Breastfeeding Self-Efficacy Scale - Short Form (BSES-SF) in postnatal mothers. Fortaleza. [Dissertation]. Fortaleza (CE). Federal University of Ceará. 2008.

[17] Stevens J. Applied multivariate statistics for the social sciences. Hillsdale, NJ: Lawrence Erlbaum; 2002.

[18] Kaiser H. An index of factorial simplicity. Psychometrika. 1974; 39: 31-36. http://dx.doi.org/10.1007/BF02291575

[19] Bartlett MS. A note on the multiplying factors for various chi square approximations. J Roy Stat Soc. 1954; 16: 296-298.

[20] Tabachnick B, Fidell L. Using multivariate statistics. New York, NY: Harper Collins; 1989.

[21] Nunnally JC, Bernstein IH. Psychometric theory. (3rd ed.) New York, NY: McGraw-Hill. 1994.

[22] Alus TM, Okumuş H, Dennis CL. Translation and psychometric assessment of the Breastfeeding Self-Efficacy Scale – Short Form among pregnant and postpartum women in Turkey. Midwifery. 2010; 26: 101-108. PMid:18541350

[23] Dai X, Dennis CL. Translation and validation of the Breastfeeding Self-Efficacy Scale into Chinese. J Midwifery Women's Health. 2003 Sep-Oct; 48(5): 350-6. http://dx.doi.org/10.1016/S1526-9523(03)00283-6

[24] McCarter-Spaulding DE, Dennis CL. Psychometric testing of the Breastfeeding Self Efficacy Scale-Short Form in a sample of black women in the United States. Res Nurs Health, 2010; 33: 111-119. PMid:20127984

[25] Hamlyn B, Brooker S, Oleinikova K, Wands S. Infant feeding Survey 2000. BMRB Soc Res. 2002; 1-15.

[26] Narayan S, Natarajan N, Bawa KS. Maternal and neonatal factors adversely affecting breastfeeding in the perinatal period. MJAFI. 2005; 61: 216-219.

[27] Gurgel MGI, Alves MDS, Vieira NFC, Pinheiro PNC, Barroso GT Pregnancy in adolescence: tendencies in the scientific production of nursing. Esc Anna Nery Rev Enferm 2008 dez; 12 (4): 799-05.

[28] Zubaran C, Foresti K, Schumacher M, Thorell R, Amoretti A, Muller L, et al. The Portuguese version of the Breastfeeding Self-Efficacy Scale – Short Form. J Hum Lact. 2010; 26: 297-303. PMid:20139376 http://dx.doi.org/10.1177/0890334409359916

[29] Bezerra FM, Ramos FS. Diferenças Regionais de Crescimento Econômico no Brasil: a importância da especificação de capital humano. Rev Bras Estud Urb Reg. 2008; 2: 32-52.

[30] Instituto Brasileiro de Geografia e Estatística (IBGE). Síntese de indicadores sociais. Uma análise das condições de vida da população brasileira. Rio de Janeiro: IBGE; 2011.

[31] Vituri SC, Brito ASJ. Prevalência do aleitamento materno em crianças até o sexto mês de idade na cidade de Maringá, estado do Paraná, Brasil. Acta Sci Health Scienc. 2003; 25: 141-146.

[32] Forster, DA, McLachlan, HL. Breastfeeding initiation and birth setting practices: a review of the literature. J Midwifery Women's Health. 2007; 52: 273-80. http://dx.doi.org/10.1016/j.jmwh.2006.12.016

[33] World Health Organization (WHO). Breast-feeding in the 1990s: Review and implications for a Global Strategy. Based on the Technical Meeting, Geneva: WHO; 1990.