ADVANCES AND CHALLENGES OF BREASTFEEDING IN BRAZIL: AN INTEGRATIVE REVIEW

Avanços e desafios do aleitamento materno no Brasil: uma revisão integrativa

Avances y desafíos de la lactancia materna en Brasil: una revisión integrativa

ABSTRACT

Objective: To analyze the panorama of breastfeeding in Brazil through an integrative literature review highlighting its advances and challenges. **Methods:** We carried out an integrative literature review in the SciELO and PubMed databases and in booklets published on the websites of the Ministry of Health and the International Baby Food Action Network (IFBAN) using the following Portuguese and English descriptors: aleitamento materno (breastfeeding), autoeficácia (self-efficacy), promoção da saúde (health promotion) and desmame (weaning) in the period from 2002 to 2015. **Results:** We identified at first 43 articles, 33 booklets, 1 thesis and 3 dissertations, including in the study 17 articles, 3 dissertations and 19 booklets due to information saturation. It was verified that breastfeeding rates have reduced significantly over time with direct implications in infant mortality rates, being associated with early weaning and the lack of promotion of maternal self-efficacy in the prenatal and postpartum. To change this situation, Brazil imposed a number of public policies aimed at breastfeeding success, which advocated to raise rates. **Conclusion:** Despite the advances, the Brazilian panorama of breastfeeding shows that the country remains below the recommendations of international organizations, and overcoming the obstacles to successful breastfeeding constitutes a major challenge for the Brazilian public health.

Descriptors: Breastfeeding; Self-efficacy; Health Promotion; Weaning.

RESUMO

**Objetivo:** Analisar o panorama do aleitamento materno no Brasil, por meio de revisão integrativa da literatura, destacando os seus avanços e desafios. **Métodos:** Realizou-se revisão da literatura de forma integrativa, nas bases de dados SciELO e PubMed, além de cartilhas publicadas nos sites do Ministério da Saúde e da Rede Internacional em Defesa do Direito de Amamentar (IBFAN), utilizando-se os descritores em português e inglês: aleitamento materno (breastfeeding), autoeficácia (self-efficacy), promoção da saúde (health promotion) e desmame (weaning), no período de 2002 a 2015. **Resultados:** Identificaram-se inicialmente 43 artigos, 33 cartilhas, 1 dissertação e 3 teses, sendo incluídos no estudo 17 artigos, 3 teses e 19 cartilhas, devido à saturação das informações. Percebeu-se que os índices de aleitamento materno reduziram significativamente ao longo do tempo, com implicações diretas nas taxas de mortalidade infantil, estando associadas ao desmame precoce e à ausência da promoção da autoeficácia materna no pré-natal e no puerpério. Para reverter esse quadro, o Brasil instituiu políticas públicas voltadas para o sucesso da amamentação, que preconizam elevar os indicadores. **Conclusão:** Apesar dos avanços, o panorama brasileiro relativo à amamentação demonstra que o país permanece aquém das recomendações dos organismos internacionais, constituindo-se num dos grandes desafios da saúde pública brasileira a superação dos obstáculos que impedem o sucesso do aleitamento materno.

Descritores: Aleitamento materno; Autoeficácia; Promoção da Saúde; Desmame.
RESUMEN

Objetivo: Analizar el panorama de la lactancia materna en Brasil a través de una revisión integrativa de la literatura destacando sus avances y desafíos. Métodos: Se realizó una revisión de la literatura de manera integrativa en las bases de datos SciELO y PubMed, además de cartillas publicadas en las páginas web del Ministerio de la Salud y de la Red Internacional en Defensa del Derecho de Amamantar (IBFAN), utilizando los descriptores en portugués e inglés: lactancia materna (breastfeeding), autoeficacia (self-efficacy), promoción de la salud (health promotion) y destete (weaning) en el periodo entre 2002 y 2015. Resultados: A principio se identificaron 43 artículos, 33 cartillas, 1 disertación y 3 tesis, siendo incluidos en el estudio 17 artículos, 3 tesis y 19 cartillas debido la saturación de las informaciones. Se percibió que los índices de lactancia materna se redujeron significativamente a lo largo del tiempo con implicaciones directas en las tasas de mortalidad infantil, asociándose con el destete precoz y la ausencia de la promoción de la autoeficacia materna en el prenatal y el puerperio. Para revertir ese cuadro, Brasil ha instituido políticas públicas dirigidas al éxito de la lactancia materna que preconizan la subida de los indicadores. Conclusión: A pesar de los avances, el panorama brasileño de lactancia materna muestra que el país sigue abajo de las recomendaciones de los organismos internacionales, constituyéndose en uno de los grandes desafíos de la salud pública brasileña la superación de los obstáculos que impiden el éxito de la lactancia materna. Descriptores: Lactancia Materna; Autoeficacia; Promoción de la Salud; Destete.

INTRODUCTION

The presence of poor breastfeeding indicators has caused major problems to public health, particularly with regard to infant mortality rates, with a consensus that breastfeeding prevents many infant deaths. Of the 10 million child deaths recorded annually worldwide, a million and half of them would be avoided by increasing the coverage to 90% of exclusive breastfeeding in the first six months of life in developing countries(1); however, 2013 data from UNICEF show that only 39% of children under six months of life receive exclusive breastfeeding(2).

Among the aspects related to the reduction in the rates of breastfeeding (BF) in Brazil, there is the role of marketing established by formula companies, which, among other practices, carried out the free distribution of their products to mothers of newborns, spreading the idea that artificial feeding was better than BF. Other factors for the fall in these rates identified in the literature were the processes of industrialization and urbanization, women’s insertion in the labor market and the culture of bottle-feeding, which had a symbolic attribute of modernity(3).

Given the steady decline in breastfeeding rates, the Ministry of Health in Brazil drew lines of action such as the Área Técnica de Saúde da Criança e Aleitamento Materno (Child Health and Breastfeeding Technical Area)/Departamento de Ações Programáticas Estratégicas - DAPES (Department of Strategically Programmed Actions)/Secretaria de Atenção à Saúde - SAS (Health Care Secretariat), focused on the promotion, protection and support of breastfeeding, as this triad contributes to reducing infant mortality in addition to allowing Brazil meet the goals established by international organizations(4).

These goals were set in the 2000 Millennium Declaration as a means of changing the global scenario in relation to the alarming rate of poverty, where one in three people lived on less than a dollar a day. Among the goals, some refer to maternal and child health: to reduce infant mortality and improve maternal health by 2015. According to these goals, infant mortality rates should decrease to 17.9 deaths for every thousand live births, and maternal health indicators should be improved so that mortality rates were equal to or less than 35 deaths per 100,000 live births(5).

In this respect, Brazil reached one of the Millennium Development Goals already in 2011, reducing infant mortality by two thirds between 1990 and 2015, obtaining an infant mortality rate of 15.7 deaths. This decrease was proportional in all Brazilian regions; however, the Northeast region was the one with the highest percentage of decrease in these rates: circa 6.6% per year(6).

Given this scenario, it is clear the importance of promoting breastfeeding, which provides, among its many benefits, the reduction in the incidence of infectious diseases and allergies, leading to a reduction in infant mortality for ensuring appropriate nutritional support for the child. It also reduces the mother’s risk of developing some types of cancer and anemia, prolongs the interval between future pregnancies and provides greater satisfaction in relation to women who do not breastfeed(7).

In addition to the role of breastfeeding in reducing infant mortality, it has been identified as an important factor in protecting the health of the individual in the long term. Research has proven that it prevents overweight and obesity during childhood and adulthood and is involved in the metabolic imprinting process, which refers to the early nutritional experience of the individual in critical and timely periods that lead to a prolonged and constant effect throughout life and susceptibility to some diseases(8,9).

A recent study also shows that breastfeeding has cognitive effects. Children who are breastfed for a longer...
period of time presented higher levels of intelligence and higher average incomes in adulthood\(^{(10)}\).

Given the importance of breastfeeding, the factors involved in its performance have been constantly studied. Self-efficacy has recently gained prominence; it refers to the maternal confidence in breastfeeding, which directly influences the practice and duration of breastfeeding\(^{(11)}\).

In this sense, maternal confidence in breastfeeding is built upon four types of information, including: the successful personal experience in the previous lactation period, through experienced moments that encourage breastfeeding; counselling and support from intimate people who encourage breastfeeding; and good emotional and physiological state to contribute to the successful breastfeeding\(^{(12)}\).

Given the importance of breastfeeding in the maternal and child health and the prevention of noncommunicable diseases, the aim of this study was to analyze the panorama of breastfeeding in Brazil through an integrative literature review highlighting its advances and challenges.

**METHODS**

For the preparation of this article, an integrative literature review was conducted by searching the online databases Scientific Electronic Library Online databases (SciELO) and US National Library of Medicine and the National Institutes of Health (PubMed) and the booklets and other relevant publications on the websites of the Ministry of Health, the Institute for Applied Economic Research and the International Baby Food Action Network (IBFAN). The search was carried out between September 2014 and April 2015.

The search of articles was carried out using the following descriptors included in the *Descritores em Ciências da Saúde* - DeCS (Health Sciences Descriptors: http://decs.bvs.br): breastfeeding (*aleitamento materno*), self-efficacy (*autoeficácia*), health promotion (*promoção da saúde*) and weaning (*desmame*). The terms were used in Portuguese and/or English depending on the database searched.

The research took place between September 2014 and April 2015 and included articles and booklets that addressed breastfeeding in Brazil. The articles selected highlighted the following aspects: breastfeeding indicators, self-efficacy, early weaning causes and public policies established in the country for the promotion, protection and support of breastfeeding.

The following inclusion criteria were also used: publications dating from 2002 to 2015, including two references from 1975 and 1977 for addressing content relevant to the understanding of the paper; research involving humans and published in English and Portuguese. Publications presenting inconsistency with the theme of interest, duplicate information and papers that were not fully available were excluded.

**RESULTS**

The first search yielded 80 publications: 43 articles, 33 booklets available on the websites of the Ministry of Health, the International Baby Food Action Network and the Institute for Applied Economic Research, in addition to 1 thesis and 3 dissertations.

Of the 80 studies analyzed, it was noted that less than half, 48.75% (n=39), was in line with the theme addressed in the present research. After reading and evaluating the content, we included 17 articles in the present review due to the saturation of information; in addition, 3 dissertations and 19 booklets were also included because they had a theoretical matrix based on the study objectives.

In summary, the selected studies, with regard to breastfeeding indicators in Brazil and the role of maternal self-efficacy for its promotion, presented no conformities in relation to methodologies. As the theme is broad, each author emphasizes a particular topic and correlates it to the variables of interest, which constitutes one of the difficulties in comparing studies and obtaining the real dimension of these indicators.

Table I - Percentage of breastfeeding indicators in Brazil by regions according to the *II Pesquisa de Prevalência sobre o Aleitamento Materno* (II Research on Breastfeeding Prevalence) conducted in the year 2008\(^{(15)}\).

<table>
<thead>
<tr>
<th>Percentage of EBF by regions</th>
<th>Percentage of BF by regions</th>
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<tr>
<td>N  CW S SE NE</td>
<td>NW CW S SE NE</td>
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<tr>
<td>45.9% 45% 43.9% 39.4% 37%</td>
<td>76.9% 64.1% 59.1% 51.4% 49.5%</td>
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Source: Venancio; Escuder; Saldiva; Giugliani, 2010.
Moreover, self-efficacy is a recent issue that has been gradually addressed in Brazil. This fact is proven by the period in which the studies were published: the year 2002 has been taken as a starting point, but only from the year 2010 is that there was a greater number of publications about the issue: circa 56.41% (n=22).

However, in Brazil, there were studies using the self-efficacy scale in only three Brazilian cities: Fortaleza, Caxias do Sul and São Paulo. The first, located in the Northeast region; the second, in the South; and the third, in the Southeast of the country. This fact does not allow to determine a reliable profile, as these are cities with very different sociodemographic characteristics.

DISCUSSION

Breastfeeding indicators in Brazil

Until the 1980s, there was a huge shortage of records on the prevalence of breastfeeding in Brazil, and it was only from then that research began to be carried out, showing its relevance and verifying the need for standardization of data collection to provide greater reliability of the results(13).

However, research shows that, in fact, the reality of breastfeeding (BF) indicators in Brazil was only assessed in 1999 by the Ministry of Health through data collected in all Brazilian capitals, except in Rio de Janeiro. After this period, a new nationwide study was only carried out in Brazil in 2008: II Pesquisa de Prevalência do Aleitamento Materno (II Research on Breastfeeding Prevalence). The research was conducted in all Brazilian capitals and the Federal District, making it possible to draw a parallel between indicators assessed over almost ten years. Thus, it was possible to identify the positive and negative rates and outline new goals(4).

It should be noted that the 2008 data are the latest. In 2014, a pilot study was conducted to validate a new methodology to measure BF rates in three capital cities (Rio de Janeiro, Recife and Brasilia). Maybe, in 2015, it can be extended to all the capitals of Brazil, with the goal of reaching the age group of children under the age of two and the inclusion of healthy complementary feeding. After this stage, it is expected that in 2016 the Demographic and Health Surveys (DHS) can be applied years after the last collection(14).

The results obtained in the 2008 survey showed that the rate of exclusive breastfeeding (EBF) in children under six months of age was around 41% of the sum of the capitals and the Federal District. However, when this prevalence was analyzed by capital, it was found that the North region had the highest rate of EBF and the Northeast region had the lowest rate, as it can be seen in Table I(15).

By comparing the prevalence of exclusive breastfeeding in the period from 1999 to 2008 in the Brazilian population, we found an increase in its average duration, with an extension of one month, i.e., from 23.4 to 54.1 days, showing an improvement in the incidence of this practice(19).

Regarding the analysis of BF in children aged 9-12 months, it was found a prevalence of 58.7%, with the North region continuing to present the best indicators, as it can be seen in Table I. By comparing the years 1999 and 2008, it was noted that the prevalence of BF increased from 295.9 to 341.6 days, an increase of approximately 45 days(15).

These two studies found that the North region had the best rates and that Brazil had greatly improved its breastfeeding rates over almost ten years. The improvement in indicators was associated with the high level of maternal education, the age of women when they decide to get pregnant and maternity leave duration, which in some cases reaches six months. Despite the progress made, the country is still far from achieving the targets set by the WHO and the Ministry of Health for exclusive breastfeeding(9).

The discrepancy in the prevalence rates of both EBF and BF in the different regions is explained by the fact that Brazil is a country with a vast territory and rich in diversity(16).

Early weaning causes

Weaning refers to the supply of foods other than breast milk for the child, ranging from the introduction of teas and water and leading to the full withdrawal of breastfeeding(17). Among the factors contributing to the occurrence of this episode, there are those that have been studied over the years, which are called classic, such as: mother with an informal job or unemployed, education level, maternal age, women who claim to produce little milk, the degree of acceptance and planning of pregnancy, the emotional bond with the partner and the mother’s influence on this choice(19).

A study conducted in municipalities in the Northern region of the state of São Paulo found that mothers who had an informal job or were unemployed were among the determinants of early weaning, but the level of education and maternal age did not contribute significantly to such practice; additionally, there was no influence of maternal socioeconomic status on early weaning(19). However, two other studies(20,21) observed a correlation with the number of years spent at school by mothers: nursing mothers who had spent less than eight years at school or those with incomplete primary and secondary education had a higher incidence of weaning when compared to mothers who studied any longer. However, only one study(21) suggested an association with maternal age, in which mothers under the age of 20 presented a higher Ilof weaning.
Although studies highlight several factors influencing early weaning, perceived insufficient breast milk, which is mostly related to unreliable causes, is still the major reason pointed out by mothers. Therefore, it is extremely important to analyze the presence of real indicators of low milk production, which are the decreased diuresis and frequency of bowel movements (with changes in its characteristics), and the poor weight gain for age\(^{22}\).

Although the major factors that contribute to the interruption of breastfeeding are well established, public policies have not been effective in its control, as it can be verified from the national breastfeeding indicators, which remain below the recommendations. Thus, there has been an attempt to identify other determinants of early weaning, which - although present - are difficult to recognize, especially because of their subjective nature; thus, a great effort has been made to create strategies to quantify them. In this respect, level of maternal confidence in their ability to breastfeed should be highlighted\(^{23}\).

Such parameter is measured by a scale whose sum of answers results in a variable number of scores. The interpretation of this instrument shows that a high score is an indication that the duration of exclusive breastfeeding period tends to be longer compared to lower values\(^{24}\).

Given the aforementioned evidence, it is important to identify the determinants of early weaning, the way they interact with each other, and also coping strategies, as they can act to improve the nutritional status of children and the impacts they have on child health\(^{25}\).

**Public policies for promotion, protection and support of breastfeeding**

From the observation of losses arising from early weaning, the World Health Organization and the United Nations Foundation entered into partnerships with various countries in order to reduce infant mortality rates. In Brazil, the first initiative took place in the 1980s, with the implementation of the Programa de Incentivo ao Aleitamento Materno (Breastfeeding Incentive Program)\(^4\).

After it, there were several other public policies for the promotion, protection and support of BF, including: the Baby-Friendly Hospital Initiative\(^{25}\); the Norma Brasileira de Comercialização de Alimentos para Lactentes e Crianças de Primeira Infância, Bicos, Chupetas e Mamadeiras – NBCAL (Brazilian Guidelines for the Marketing of Baby Food, Pacifiers and Bottles) and Law 11.265/2006, which regulates the commerce and marketing of baby food, pacifiers and feeding bottles companies. The regulation of the dissemination of these products contributes to the protection of breastfeeding\(^1\).

In order to provide legal support and complement the Ten Steps to Successful Breastfeeding, Brazil established the Norma Brasileira de Comercialização de Alimentos para Lactentes e Crianças de Primeira Infância, Bicos, Chupetas e Mamadeiras – NBCAL (Brazilian Guidelines for the Marketing of Baby Food, Pacifiers and Bottles) and Law 11.265/2006, which regulates the commerce and marketing of baby food, pacifiers and feeding bottles companies. The regulation of the dissemination of these products contributes to the promotion of breastfeeding\(^{26}\).

In this perspective, the Ministry of Health also launched the Kangaroo Mother Care program, which consists of specialized neonatal care to stimulate early skin-to-skin contact between the mother and the newborn infant of low birth weight in order to increase bonding and hence encourage breastfeeding. This contributes to the increase in frequency, duration and precocity rates of BF and reduce the occurrence of nosocomial infection\(^{28}\).

The Stork Network was created to carry out actions targeted at women to ensure a free, safe and humanized quality service that covers family planning, prenatal care, delivery and the postpartum period up to the first two years in the child’s life. This follow-up aims to reduce maternal and child mortality and ensure a safe birth and a healthy growth and development\(^{27}\).

One of the main strategies of the Stork Network is the Rede Amamenta e Alimenta Brasil (Brazilian Breastfeeding and Feeding Network), a policy launched in 2012 through the integration of the Rede Amamenta Brasil (Brazilian Breastfeeding Network) and the Estratégia Nacional para a Alimentação Complementar Saudável -ENPACS (National Strategy for Healthy Complementary Feeding) committed to training human resources in primary care aiming at the qualification of these professionals in order to strengthen and encourage the promotion of BF and healthy feeding for children under the age of two within the Sistema Único de Saúde - SUS (Brazil’s National Health System)\(^{28}\).

Another important initiative is the World Breastfeeding Week, which consists in an international campaign where
each country adopts a specific methodology for the development of strategies suitable to their reality\(^{(29)}\).

Women can still count on the Salas de Apoio à Amamentação (Breastfeeding Support Rooms), regulated by the joint technical note No. 01/2010 of March 2009. Through this initiative, the companies provide a space for nursing mothers to pump breast milk comfortably with privacy and safety during working hours. These rooms have a refrigerated specific location to store the containers and at the end of the day, women can take them home and offer them to their children or donate to a human milk bank. Moreover, every company that has more than 30 women over the age of 16 must provide proper day care so that children are allocated throughout the breastfeeding period\(^{(50)}\).

In addition to the aforementioned policies and initiatives, Brazilian law guarantees the maternity leave as a form of protecting breastfeeding; in its original text, the low ensures 120 days of paid absence to working mothers and the right of pregnant women not to be dismissed without a cause from the time of confirmation of pregnancy up to five months after delivery; additionally, they can count on two daily breaks of thirty minutes to breastfeed their children until six months of age. In 2010, the National Congress extended the maternity leave to 180 days through the Programa Empresa Cidadã (Citizen Company Program) by granting tax incentives\(^{(31)}\).

In the case of mothers who study, the legislation is still incipient. The law that regulates this issue dates from the 1970s and provides only 90 days away from school\(^{(32)}\). For fathers, the Constitution also guarantees the five-day paternity leave after the child’s birth in order to facilitate the civil registration of the newborn and organize the arrival of the baby at home\(^{(49)}\).

Although policies to promote breastfeeding have progressed, it cannot be said, based on statistics, that it has been effective in increasing BF rates throughout the Brazilian territory, since the available indicators did not follow their evolution. Thus, it is necessary to wait on new studies to see whether the trend of increase in these rates actually occurred\(^{(14)}\).

Breastfeeding self-efficacy

Breastfeeding self-efficacy refers to the level of confidence that the mother has in her ability to breastfeed. In this respect, it should be noted that it is well established in the literature the Bandura’s theory of self-efficacy\(^{(33)}\), according to which any action that the human being will play always involves self-efficacy because the individual has the need to feel encouraged to face different obstacles that will arise every day in the life.

Based on this theory and on the need to measure factors susceptible to intervention that might explain the early interruption of breastfeeding, a study developed and validated the Breastfeeding Self-Efficacy Scale\(^{(34)}\) in 1999 in Canada. The relevance of the application of this method to investigate the maternal confidence in breastfeeding allows the design of intervention strategies in the points of greatest vulnerability of each nursing mother.

Because of its importance, the scale was adapted, validated and translated to Portuguese\(^{(35)}\), and then used in a study conducted with pregnant women in the city of Fortaleza, state of Ceará\(^{(23)}\). The final test was applied to 117 pregnant women and obtained satisfactory results that suggested the effectiveness of the scale to identify specific points of maternal confidence level in breastfeeding both at the research and clinical level, allowing health professionals to work on issues for which pregnant women are less confident and allowing them to intervene and reduce early weaning rates\(^{(23,34)}\).

The national validation of the Breastfeeding Self-Efficacy Scale\(^{(34)}\) has allowed the development of important studies nationwide in different stages of lactation, such as a study\(^{(35)}\) conducted in Southern Brazil with nursing mothers. The results of the aforementioned research have shown that high self-efficacy scores were related to the practice of exclusive breastfeeding. In the study of 100 postpartum women in a private hospital in the city of São Paulo using the Breastfeeding Self-Efficacy Scale - Short Form (BSES-SF), the scores for self-efficacy in breastfeeding were high in most mothers assessed (82.3%); however, no statistically significant difference was found when comparing the average duration of exclusive and non-exclusive breastfeeding to the medium and high efficiency scores\(^{(36)}\).

Another result of the adaptation of this research tool in the Brazilian context was the development of the flipchart titled “I can breastfeed my son” developed and validated\(^{(37)}\) based on the issues addressed on the BSES-SF. This study was conducted with 201 postpartum women in a public maternity hospital in Fortaleza, Ceará, who were subdivided into two groups: control and intervention. The latter received BF counselling through the flipchart and presented a high maternal self-efficacy in breastfeeding that lead to a longer duration of BF.

Thus, there are now two important references in the search for improved breastfeeding indicators: the self-efficacy scale, which allows the identification of points
of maternal vulnerability in the ability to breastfeed, and the flipchart “I can breastfeed my son”, which can be used to increase the scores of self-efficacy in breastfeeding, which translates into increased mother’s confidence in their ability to initiate and maintain breastfeeding. Recent study results\(^{11}\) reaffirm the importance of these instruments and show that the use of this flipchart had great impact on nursing mothers, as they have shown more confidence and determination to breastfeed after the intervention.

Noteworthy, the studies show that the use of methodologies based on the theory of self-efficacy has major impacts on the duration of breastfeeding, as it identifies the most vulnerable points of pregnant and nursing women. Thus, maternal confidence should be strengthened in order to avoid early weaning\(^{38}\).

**CONCLUSION**

We conclude that despite the efforts made for its appreciation, the Brazilian panorama of breastfeeding is deficient.

With regard to breastfeeding indicators, they are still below the recommended by international organizations. As for the public policies established, they are based on well-founded principles; however, they need to be more effective in the consolidation of a breastfeeding support network, which consists in the training of health professionals to encourage breastfeeding and stimulate women’s self-efficacy in breastfeeding, as it is proven that this factor is decisive because it discourages early weaning.

Thus, there is a need for constant studies aimed to periodically analyze this situation in order to guide the actions of health professionals and organizations to obtain greater effectiveness so that more people can enjoy the benefits of breastfeeding.

**REFERENCES**


Mailing address:
Artemízia Francisca de Sousa
Universidade Federal do Piauí (UFPI)
Campus Senador Helvídio Nunes de Barros
Rua Cicero Eduardo s/n
Bairro: Junco
CEP: 64.600-000 - Picos -PI - Brasil
E-mail: artesousa@hotmail.com