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ORIGINAL ARTICLE

NBCAL: the view of brazilian pediatricians

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Abstract

The Brazilian Standard for the Marketing of Food for Infants and Young Children, Nipples, Pacifiers and Bottles (NBCAL) is a legal framework that brings together several provisions to control the marketing of food for infants and related items. It is extremely important that it is known by professionals who are responsible for guiding healthy choices for parents and guardians regarding the feeding of children in this age group. This study aimed to identify gaps in the knowledge of pediatricians and other Brazilian health professionals who participated in the 41st Brazilian Congress of Pediatrics about NBCAL. A sample of 36 pediatricians and other health professionals registered for the 4th Breastfeeding Symposium of the Brazilian Society of Pediatrics were approached. They answered a questionnaire that addressed personal characteristics such as age, time since training, place of work and correlated with their answers to a test administered before the training. The questionnaire was conducted using the Survey Monkey platform, ensuring data confidentiality and security. The data obtained were compiled into spreadsheets and the results described in graphs and spreadsheets. The results obtained demonstrated that there is still a great lack of knowledge about national legislation. It is therefore concluded that training should be carried out more systematically among the academic community, also during undergraduate and postgraduate training.

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INTRODUCTION

The Brazilian Standard for the Marketing of Foods for Infants and Young Children, Teats, Pacifiers, and Baby Bottles (NBCAL) has existed in Brazil since 1988 and has incorporated additional products over time[1]. In this sector, the marketing industry targets nutritionists and pediatricians[2], who are responsible for providing dietary counseling in this age group. For this reason, marketing pressure has become increasingly intense and current, and what previously occurred only through in-person interactions now takes place on a large scale via social media[1].

In light of this extensive pressure exerted by companies [1], it is evident that there is an overlap of information, whereby scientific evidence on the benefits and advantages of breast milk[6] is constantly questioned by the launch of new products and, consequently, the distribution of new samples[5]. This represents a loophole in the Code that allows the industry to disseminate samples to healthcare professionals[1].

In Latin America, this phenomenon of marketing pressure from food companies has been investigated in recent years, with particular attention to the growing presence of digital media[8]. A recent review showed that legal barriers vary widely among WHO member countries that have adopted the "Code," and it was suggested that solutions using new technologies are the most appropriate for countries with limited human resources. In addition, training healthcare professionals was highlighted as being very important to ensure that communication strategies are properly understood by both healthcare professionals and merchants[9].

Observations regarding the advertising of infant formula in South Africa have shown that, despite legislation prohibiting such advertising, advertisements were placed in magazines aimed at parents of young children, and a significant number of pediatricians encouraged the introduction of solid foods before 6 months of age. This reinforces that, even with appropriate policies in place, dissemination of knowledge to change the prevailing paradigm is of fundamental importance[10].

It is essential that the Brazilian Society of Pediatrics acts in accordance with legislation, making appropriate use of sponsorship from the food industry without allowing itself to be influenced by market interests[11]. Evidence of this is the 41st Brazilian Congress of Pediatrics, which received sponsorship from infant formula companies while also hosting a seminar addressing the NBCAL.

In view of this evidence and the ongoing effort to promote peaceful and organized coexistence among sectors, always respecting legislation, knowledge of this legislation becomes urgent and necessary. Therefore, during the 4th Breastfeeding Symposium held on October 22, 2024, information was collected on how pediatricians understand the legislation, with the following objectives: to identify gaps in knowledge about the NBCAL among Brazilian pediatricians and other healthcare professionals who participated in the 4th Brazilian Breastfeeding Symposium of the Brazilian Society of Pediatrics at the 41st Brazilian Congress of Pediatrics; to characterize participants of the 4th Brazilian Breastfeeding Symposium of the Brazilian Society of Pediatrics at the 41st Brazilian Congress of Pediatrics in terms of age, workplace, and whether they work directly with breastfeeding; to describe the presence of visits to healthcare professionals by the food industry for infants and young children; to verify whether there was a change in knowledge following specific NBCAL training in the face of approaches by the food industry; and to determine whether NBCAL teaching occurred in training environments (undergraduate or postgraduate education).

METHODS

This was a cross-sectional study conducted on October 22, 2024, during the 4th Breastfeeding Symposium at the 41st Brazilian Congress of Pediatrics. All individuals registered for the 4th Breastfeeding Symposium were invited to complete an electronic questionnaire on the SurveyMonkey platform, which included data such as age, years since graduation, workplace, and characteristics of visits by representatives of the food industry, in addition to questions regarding knowledge of the NBCAL and harassment by the pharmaceutical industry, as shown in Table 1. All participants who agreed to take part signed an Informed Consent Form.

A total of 45 individuals were registered for the symposium, and 36 questionnaire responses were obtained. This study was submitted to the Research Ethics Committee of Universidade Vila Velha (CEP-UVV) under CAAE: 83753524.3.0000.5064 and was approved under number 7.163.907.

The results were exported into Excel spreadsheets directly from the platform and were also presented in graphs illustrating correct responses, with descriptive statistics performed based on the answers.

RESULTS

A total of 36 pediatricians were surveyed, most of whom (75%) were over 30 years of age and worked in the southern and southeastern regions of the country. São Paulo accounted for 7 participants, Rio de Janeiro and Santa Catarina for 4 participants each, and Santa Catarina for 3 participants. The remaining participants did not report their state of origin. Regarding workplace (Figure 1), most participants worked in public healthcare services; however, there was no distinction regarding physicians holding more than one job position. The vast majority worked directly with breastfeeding (88.89%), which is justified by the theme of the symposium.

Table 1. Questionnaire administered to pediatricians

QUESTIONS	RESPONSE OPTIONS	CORRECT ANSWER
1) The Espírito Santo Society of Pediatrics is organizing an event for its members and is seeking sponsors. According to NBCAL regulations, from which of the options below may this society receive sponsorship?	a) Infant formula industries.b) Brands of infant products.c) Food industries.d) All of the above.	**d) All of the above.**
2) In the city of Fortaleza, a large pharmacy chain ran a major promotion during Mother's Week with several products. Among the options below, indicate which complies with the NBCAL.	a) **ECONOMIC PROMOTION:** Any buyer registered in the Unified Registry or Bolsa Família program may purchase formula, baby bottles, or pacifiers with a 20% discount.b) **MATERNITY PROMOTION:** Any pregnant woman who purchases in our store receives a pacifier and baby bottle kit with a 25% discount.c) **BABY PROMOTION:** For every four packs of disposable diapers purchased, of any size, receive the fifth pack free.d) **INFANT PROMOTION:** Buy one and get two cans of starter infant formula.	**c) BABY PROMOTION: For every four packs of disposable diapers purchased, of any size, receive the fifth pack free.**
3) At a Pediatric Congress in Salvador, several promotional items were being distributed at sponsors' booths. Among them, indicate which is approved by the NBCAL.	a) Growth charts with the logo of a food industry company.b) Notepads with the logo of vaccination clinics.c) Tablet pens with the logo of a pacifier manufacturer.d) Pens at the booths of infant formula industries.	**b) Notepads with the logo of vaccination clinics.**
4) At a municipal outpatient clinic in Manaus, monthly visits by representatives of infant formula companies were taking place, during which samples were delivered to physicians and nutritionists. According to the NBCAL, when may these samples be provided?	a) Whenever requested for a more socially vulnerable patient.b) When a new physician or nutritionist arrives.c) At the launch of new products.d) At each monthly visit.	**c) At the launch of new products.**
5) During monthly visits to the Pediatric Outpatient Clinic of the Federal University of Porto Alegre, representatives of the infant formula industry distributed growth charts with illustrations of infant formula cans to all pediatricians, who then provided them to patients to inform them about nutritional diagnosis. According to the NBCAL, this practice is:	a) Incorrect, because all patients bring the Vaccination Booklet, which should be used to monitor nutritional status.b) Correct, because growth charts are very important for monitoring patient health.c) Incorrect, because growth charts provided to patients may not contain illustrations of infant formula.d) Correct, because every patient has the right to know their nutritional status.	**c) Incorrect, because growth charts provided to patients may not contain illustrations of infant formula.**
6) At a Medical Congress in São Luís, a food industry company for early childhood was distributing promotional items to visitors at its booth. Among the alternatives below, indicate which items are permitted by the NBCAL.	a) Notepads with the company logo.b) Pens with the logo of the food company.c) Tablet pens with the industry logo.d) Coffee served in cups with the logo and biscuits.	**d) Coffee served in cups with the logo and biscuits.**
7) A food company producing infant formula planned a course for medical residents in a European country where its headquarters are located. Travel, accommodation, and food expenses would be fully covered by the company. According to the NBCAL, this practice was:	a) Permitted only for travel, but not accommodation, as it would be an investment in the training of young professionals.b) Permitted, because all sectors of society should be involved in medical training.c) Prohibited, as it constitutes a conflict of interest, since the resident physician is a prescriber.d) Prohibited, because it would encourage young physicians to seek rewards on other occasions.	**c) Prohibited, as it constitutes a conflict of interest, since the resident physician is a prescriber.**
8) A Banco do Brasil billboard displayed a photo of a healthy-looking baby using a pacifier. According to the NBCAL, this advertisement was:	a) Permitted, because it did not involve a newborn and the prohibition applies only to newborns.b) Prohibited, because advertising pacifiers, baby bottles, or nipple shields is not permitted.c) Permitted, because it was an advertisement for a bank and unrelated to children.d) Prohibited, because advertisements with images of children using pacifiers are not permitted.	**d) Prohibited, because advertisements with images of children using pacifiers are not permitted.**

QUESTIONS	RESPONSE OPTIONS	CORRECT ANSWER
9) A university in Goiânia will receive a group of residents in 2025. A food company will offer breakfast at a restaurant to welcome them on the first day of the medical residency program. According to NBCAL regulations, this practice is:	a) Permitted, because they have the right to be acknowledged by the industry.b) Prohibited, because it constitutes a conflict of interest.c) Permitted, provided there is no logo exposure.d) Prohibited, provided no samples are distributed.	**b) Prohibited, because it constitutes a conflict of interest.**
10) The Martagão Gesteira Institute in Pernambuco is a Baby-Friendly Hospital. During the last winter, there was a high hospitalization rate of young, weaned infants due to bronchiolitis, leading to increased consumption of infant formula. A 25% discount was offered during the winter period to avoid major financial impact on the institution. According to the NBCAL, this practice is:	a) Permitted because it is an exceptional situation involving hospitalized, weaned infants requiring industry support.b) Prohibited because, under the Baby-Friendly Hospital Initiative, discounts on the acquisition of formula are not permitted.c) Prohibited due to conflicts of interest among infant formula industries.d) Permitted because it involves weaned infants not covered by the Code.	**b) Prohibited because, under the Baby-Friendly Hospital Initiative, discounts on the acquisition of formula are not permitted.**

Source: Prepared by the authors.

When asked about having read the NBCAL, 50% of respondents stated that they had read the document, while the other 50% had not. However, where should this knowledge be incorporated? In our study (Figure 2), we observed that the majority of respondents (66.67%) had not been exposed to this topic during undergraduate or postgraduate training.

Subsequently, ten questions regarding understanding of the NBCAL were presented (Table 1), and the responses were analyzed. A training program was then conducted, consisting of workshops using various active learning methodologies, covering the different topics of the NBCAL and reinforcing the themes addressed by the questions. The results are presented in Table 2.

DISCUSSION

According to the Brazilian Medical Demography report [10], medical practice in Brazil is indeed distributed between the public and private sectors, with physicians commonly holding more than one job and being predominantly concentrated in the Southern and Southeastern regions of the country.

In a study conducted in Mexico in 2019, only 41.6% of healthcare professionals were aware of the Code[13], while a survey carried out in eight countries, including those in Latin America, Asia, and Africa, revealed that 50% of the professionals surveyed were also unaware of their national legislation. In addition, the marketing of breast-milk substitutes was found to be widespread, presenting multiple characteristics and a wide variation of promotional strategies aimed at circumventing country-specific legislation[10].

Studies conducted in South Africa point to a lack of dissemination of this knowledge, which reinforces the influence of the food and pharmaceutical industries. In the cited study, only 8% of respondents reported having received this type of knowledge during their training[15].

Based on the responses provided by pediatricians—professionals who are most actively engaged in promoting breastfeeding due to its benefits for both mother and infant, regardless of socioeconomic status[16], it becomes evident that there is a lack of awareness of current legislation, even among professionals who work directly with breastfeeding. This finding reinforces the need for investment in training healthcare professionals, in line with previous observations by several authors who emphasize this necessity[14].

Regarding the pursuit of sponsorships, fewer than 40% of respondents selected the correct answer. This suggests limited awareness of the strategies used by the industry to maintain its presence, sponsor events, and subtly promote alternatives to breastfeeding, particularly through labeling at points of sale[17]. Another question with a low rate of correct responses concerned the search for sponsorship for events, highlighting significant uncertainty about what is permitted under Brazilian legislation. This issue is not unique to Brazil but is also observed internationally[15].

In questions addressing funding for events, such as the provision of courses or travel expenses, there was greater recognition of the illegality of such actions. However, this recognition may become increasingly challenged with the expansion of digital media use, as companies may maintain brand visibility even without directly funding courses or travel[18].

CONCLUSION

Breastfeeding must be promoted from multiple perspectives, one of which is legal protection. The findings indicate that even among healthcare professionals who work directly with breastfeeding, there is limited knowledge of national legislation, particularly the NBCAL. Although this legislation has been in force since 1988, it remains the target of continuous attempts at violation, with legal loopholes being progressively exploited. The most common misconceptions are related to the pursuit of sponsorship for food and events, where the subtle intervention of the food industry is often perceived as innocuous.

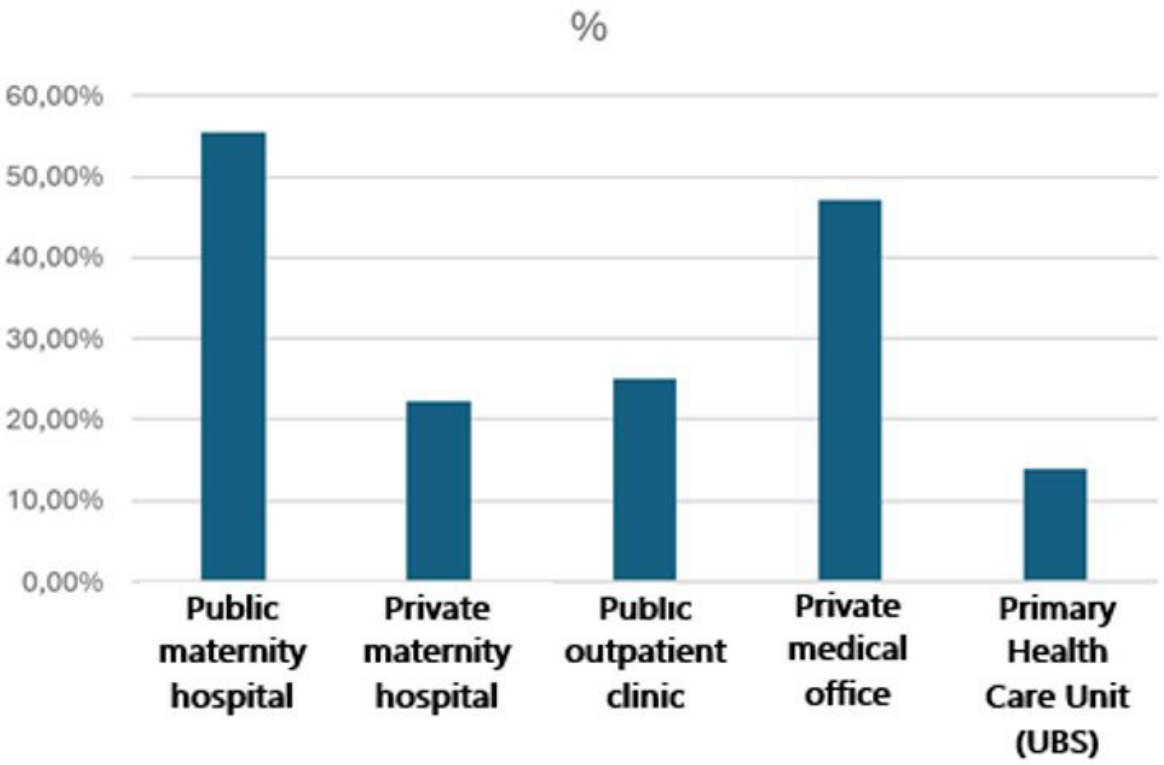

Figura 1. Locais de trabalho
Fonte: elaborado pelos autores

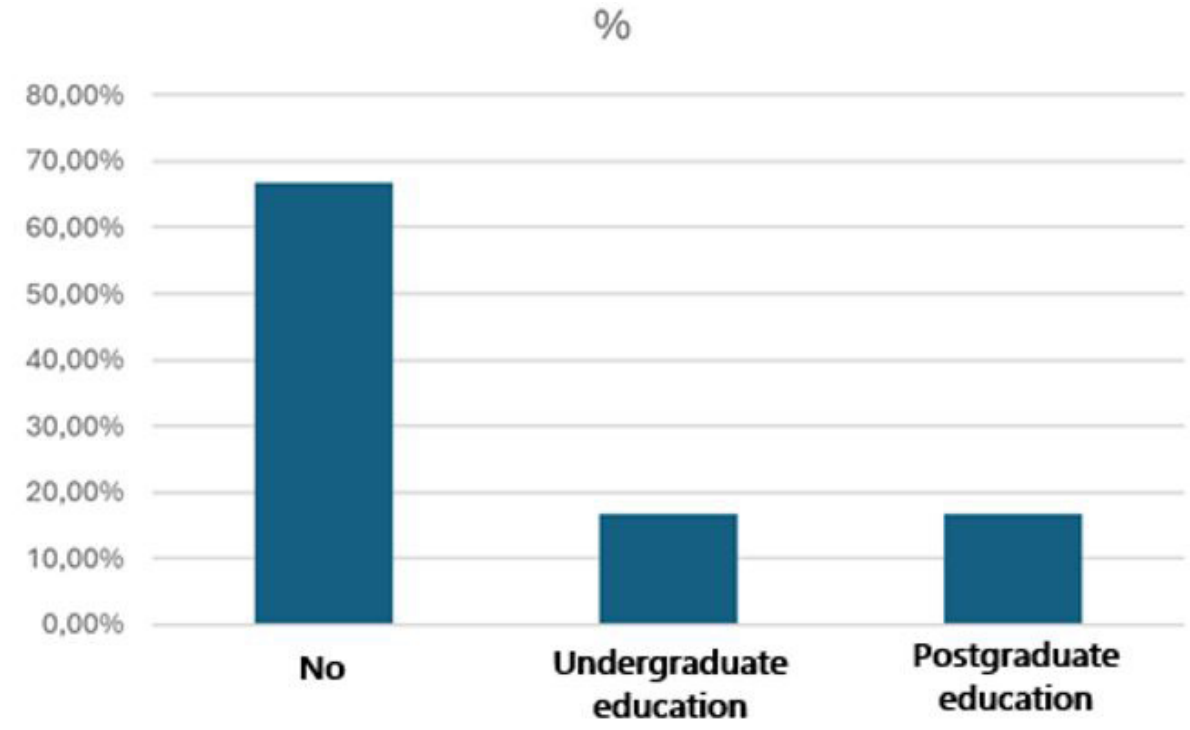

Figura 2. Informação durante formação
Fonte: elaborado pelos autores

Table 2. Percentage of correct responses

QUESTIONS	CORRECT ANSWERS
1. The Espírito Santo Society of Pediatrics is organizing an event for its members and is seeking sponsors. According to NBCAL regulations, from which of the options below may this society receive sponsorship?	39.3%
2. In the city of Fortaleza, a large pharmacy chain ran a major promotion during Mother's Week with several products. Among the options below, indicate which one complies with the NBCAL.	94.12%
3. At a Pediatric Congress in Salvador, several promotional items were being distributed at sponsors' booths. Among them, indicate which one is approved by the NBCAL.	82.35%
4. At a municipal outpatient clinic in Manaus, monthly visits by representatives of infant formula companies were taking place, during which samples were delivered to physicians and nutritionists. According to the NBCAL, when may these samples be provided?	52.94%
5. During monthly visits to the Pediatric Outpatient Clinic of the Federal University of Porto Alegre, representatives of the infant formula industry distributed growth charts with illustrations of infant formula cans to all pediatricians, who then provided them to patients as a way of informing them about nutritional diagnosis. According to the NBCAL, this practice is:	77.78%
6. At a Medical Congress in São Luís, a food industry company for early childhood was distributing promotional items to visitors at its booth. Among the alternatives below, indicate which items are permitted by the NBCAL.	80.65%
7. A food company producing infant formula planned a course for medical residents in a European country where its headquarters are located. Travel, accommodation, and food expenses would be fully covered by the company. According to the NBCAL, this practice was:	83.33%
8. A billboard from Banco do Brasil displayed a photo of a healthy-looking baby using a pacifier. According to the NBCAL, this advertisement was:	77.78%
9. A university in Goiânia will receive a group of residents in 2025. A food company will offer breakfast at a restaurant to welcome them on the first day of the medical residency program. According to NBCAL regulations, this practice is:	37.5%
10. The Martagão Gesteira Institute in Pernambuco is a Baby-Friendly Hospital. During the last winter, there was a high hospitalization rate of young, weaned infants due to bronchiolitis, leading to increased consumption of infant formula. A 25% discount was offered during the winter period to avoid major financial impact on the institution. According to the NBCAL, this practice is:	66.67%

Source: Prepared by the authors.

There is an urgent need to further disseminate knowledge about this legislation as a means of protecting breastfeeding from pressure exerted by the infant food industry. Strengthening this knowledge may empower professionals working with breastfeeding to increasingly report violations and resist marketing pressure, which is now also embedded within digital media platforms.

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