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Breastfeeding and pacifier use: implications for healthy policy

Dear Editor,

The article by Parizoto et al.,[1] published in the last issue of Jornal de Pediatria and discussed in that editorial, has called our attention due to its importance and findings, especially regarding pacifier use. This cultural practice, common in our country, and its relationship with breastfeeding have been analyzed in several studies, including a study by our research group, whose results have been published.[2] Recently, two systematic reviews have been published on this topic.[3,4] In addition, the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) recommend nonuse of pacifiers and nursing bottles in order to avoid or prevent early weaning.[5] We became interested in commenting this article because, despite WHO's recommendation, the influence of pacifier use on breastfeeding remains controversial. One of the reviews mentioned,[3] which has been recently published, analyzed the results from four randomized controlled trials and observed no difference in breastfeeding duration in comparison with different pacifier interventions. The authors concluded that, using the highest level of evidence, no relationship between pacifier use and duration of any (exclusive or not) breastfeeding was observed. In the other review mentioned,[4] a meta-analysis, the authors analyzed observational studies, mostly prospective cohort studies, 12 of them being about exclusive breastfeeding and 19 about any breastfeeding. The authors concluded that the use of pacifier was associated with shortened duration of exclusive breastfeeding as well as of any breastfeeding. Regardless of possible systematic errors associated with these reviews, most observational studies, including ours, have shown a positive association between pacifier use and shortened duration of breastfeeding, similar to that observed by Parizoto et al..[1] As observed by Fein in the editorial,[6] mentioning the authors' agreement in that sense, causality for this association remains controversial. Fein observes that sucking on a pacifier might inhibit breastfeeding and that mothers who have breastfeeding problems might turn to pacifiers to soothe their babies. In addition to soothe the baby, it is possible that this practice soothes the mother herself, who, anxious because the baby is crying, makes use of such practice to calm the baby. Both possibilities could certainly coexist. However, the main aspect is that adopting a causal model has relevant implications for public policy. About the last case mentioned, according to Fein,[6] public policy should target greater breastfeeding support in order to prevent situations that lead mothers to use pacifiers. The study by Parizoto et al.[1] has limitations, some of them pointed out by Fein, such as its cross-sectional design and the fact that some important variables were not measured, as well as the number of sessions of prenatal care, or the reduced sample size for some variables, which might have failed to reveal statistically significant associations. Furthermore, it is important to mention that Parizoto et al.[1] used the variable "use of pacifiers" with yes/no answers, thus not exploring aspects such as length or beginning of pacifier use. These limitations might have contributed to the fact that only the variable "use of pacifiers" was associated with breastfeeding interruption in the infant's first 6 months of life. The recommendations proposed by the authors based on such findings, however, to our understanding, should be considered carefully. The authors suggest that community-based and nationwide actions be introduced with the purpose of reducing the use of pacifiers. In that sense, one must be attentive so that mothers and guardians do not feel guilty about having offered pacifiers to their children. If that happens, and taking into consideration the causal hypotheses above proposed, these actions might negatively contribute to the situation. That is, due to an adverse feeling of guilt, mothers and guardians might display enhanced anxiety, which might further contribute to limit breastfeeding duration. In addition, pacifier use seems to be an ancient, deep-rooted child care practice in our culture, especially in Latin America, which makes it often difficult to convince parents not to use it. Regardless of our considerations, Parizoto et al.[1] are to be congratulated for carrying out the study and publishing the article, promoting once again a discussion extremely important for children's health, i.e., the improvement of breastfeeding rates in our country.

References

1. Parizoto GM, Parada CM, Venâncio SI, Carvalhaes MA. Trends and patterns of exclusive breastfeeding for under-6-month-old children. J Pediatr (Rio J). 2009:85:201-8.
2. Cunha AJ, Leite AM, Machado MM. Breastfeeding and pacifier use in Brazil. Indian J Pediatr. 2005;72:209-12.
3. O'Connor NR, Tanabe KO, Siadaty MS, Hauck FR. Pacifiers and breastfeeding: a systematic review. Arch Pediatr Adolesc Med. 2009;163:378-82.
4. Karabulut E, Yalçin SS, Ozdemir-Geyik P, Karaağaoğlu E. Effect of pacifier use on exclusive and any breastfeeding: a meta-analysis. Turk J Pediatr. 2009;51:35-43.
5. World Health Organization. Child and adolescent health and development [website]. http://www.who.int/child_adolescent_health/topics/prevention_care/child/nutrition/breastfeeding/en/index.html. Access: 26/07/2009.
6. Fein SB. Exclusive breastfeeding for under-6-month old children. J Pediatr (Rio J). 2009:85:181-2.

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Authors' reply

Dear Editor,

The comments by Cunha et al. on our article entitled "Trends and patterns of exclusive breastfeeding for under-6-month-old children"[1] address important reflections on the relationship between breastfeeding and pacifier use and their consequent implications for health policy.

First, it is important to point out that the objective of our study did not include an analysis of the influence of pacifier use on the prevalence of exclusive breastfeeding in the infant's first 6 months of life. Our study aimed to analyze trends of exclusive breastfeeding in a municipality that had adopted a strategy to conduct surveys about breastfeeding during vaccination campaigns and to identify population groups in which infants were less likely to be on exclusive breastfeeding, similarly to other studies which have adopted the same monitoring purpose.

Among the characteristics of the study population, we identified that pacifier use could be a factor associated with interruption of exclusive breastfeeding in under-6-month-old infants. It is worth mentioning that, due to the survey methodology, the questionnaires were designed so that participants could provide quick answers while waiting in line for vaccination, which hinders the collection of detailed information, such as introduction or length of pacifier use, although such data enabled us to conduct a population-based study. Therefore, as discussed by Cunha et al., studies such as the present one, which is consistent with the findings from other studies, several of them mentioned in our article, allow us to make assumptions about the relationship between pacifier use and weaning and suggest that further investigation, with appropriate study design, be conducted to establish a causal relation. When an association between pacifier use and interruption of exclusive breastfeeding was observed in our results, we described in the discussion section the interpretations and hypotheses found in the existing literature on this topic.

Both reviews on this topic, mentioned by Cunha et al. in their letter and published after the submission and acceptance of our article, demonstrate that much remains unknown about this issue. In the review using meta-analysis, the authors concluded that the use of pacifier was associated with shortened duration of exclusive breastfeeding and of any breastfeeding and recommend that parents be informed of this association in order to make informed decisions about their children's care.[2] The other review concluded that pacifier use does not affect breastfeeding duration negatively; however, the authors recommend that further quantitative and qualitative research be conducted to confirm such results and better understand the complex relationships between pacifier use, breastfeeding and sudden infant death syndrome.[3]

Another recent contribution concerning the above-mentioned relationships comes from a prospective study, also published after our article, investigating specifically the influence of effective breastfeeding technique and pacifier use on duration of exclusive breastfeeding during the infant's first 6 months of life in 579 mother-child pairs in Denmark, in a region where most maternity hospitals hold the title Baby-Friendly Hospital, but pacifiers are still often used. There was a negative association between pacifier use (evaluated by means of home interviews around 16 days after childbirth) and breastfeeding duration, regardless of the presence of ineffective breastfeeding technique (in the infant's first week of life) and mothers reporting breastfeeding problems (obtained from interviews 6 months after childbirth). According to the authors, ineffective breastfeeding technique and pacifier use create different problems, and when both factors were present, the risk of early breastfeeding interruption was further increased. Based on these findings, the authors recommend that pacifier use be expressly avoided in the infant's first weeks of life.[4] Fein, in the editorial about our article, highlights that studies evaluating the effect of very early pacifier use on later breastfeeding outcomes and studies that have separated the effects of early breastfeeding problems from the effects of pacifier use support this direction of causality.[5]Anyhow, even if the nature of its relationship with duration of (exclusive or not) breastfeeding is yet to be completely clarified, and even if the negative influence of its use seems to vary according to the time of its introduction, pacifier use deserves special attention in health policies targeting the pediatric population, not only because it is often associated with early weaning, but also because of other negative consequences concerning child health and development. Studies have reported negative consequences of pacifier use on orofacial development and an association with higher risk of infections, among other adverse outcomes.[6,7]

Therefore, the inclusion of a recommendation for the nonuse of artificial teats in the 'Ten steps to successful breastfeeding', from the Baby-Friendly Hospital Initiative, represented a great advance and has significantly contributed toward a shift in this practice.[5] These recommendations were designed to inform the mothers about the negative effects of using artificial teats and, based on supportive actions, help mothers to achieve this goal. It is important to point out that changing cultural habits is a difficult task, although not an impossible one, for instance we highlight the rising breastfeeding trend observed in Brazil over the past three decades and the rise in exclusive breastfeeding over the last decades, despite the also cultural and widely spread practice of offering newborn infants tea to

relieve colic. However, we need to bear in mind that these are gradual changes, as mentioned in our article.

In agreement with Cunha et al., we believe that it is crucial to promote actions to encourage pacifier nonuse, as well as pro-breastfeeding actions, within counseling practices, which do not impose such practices or make women feel guilty, but actually respect their individuality and provide relevant information to help them make informed decisions about their children's care. That is to say that professionals and mother-child health policy-makers cannot play a neutral or passive role on the use of pacifiers, a practice associated with multiple negative outcomes on the nursing infant's health and nutrition.

References

1. Parizoto GM, Parada CM, Venâncio SI, Carvalhaes MA. Trends and patterns of exclusive breastfeeding for under-6-month-old children. J Pediatr (Rio J). 2009:85:201-8.
2. Karabulut E, Yalçin SS, Ozdemir-Geyik P, Karaağaoğlu E. Effect of pacifier use on exclusive and any breastfeeding: a meta-analysis. Turk J Pediatr. 2009;51:35-43.
3. O'Connor NR, Tanabe KO, Siadaty MS, Hauck FR. Pacifiers and breastfeeding: a systematic review. Arch Pediatr Adolesc Med. 2009;163:378-82.
4. Kronborg H, Vaeth M. How are effective breastfeeding technique and pacifier use related to breastfeeding problems and breastfeeding duration? Birth. 2009;36:34-42.
5. Fein SB. Exclusive breastfeeding for under-6-month-old children. J Pediatr (Rio J). 2009;85:181-2.
6. Niemela M, Uhari M, Muttunen M. A pacifier increases the risk of recurrent active otitis media in children in Day Care Center. Pediatrics. 1995;96:884-8.
7. Peres KG, Barros, AJ, Peres, MA, Victora, CG. Effects of breastfeeding and sucking habits on maloclusion in a birth cohort study. Rev Saude Publica 2007;41:343-50.

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Breastfeeding and early childhood caries: a myth that survives

Dear Editor,

The review article by Losso et al., which was recently published in this well respected journal, had the objective of informing the readers about the risk factors for caries in patients younger than 6 years old.[1] Having read the manuscript with special interest, since one of our studies is cited among the references,[2] we would like to make some remarks about it.

Our first comment is about the use of the term caries for this age group. The term early childhood caries (ECC), adopted by the American Academy of Pediatric Dentistry (AAPD), is aimed at emphasizing the presence of caries in deciduous teeth during the first 6 years of life. The translation of the term into Portuguese (cárie precoce na infância) used by Losso et al.,[1] as well as other Brazilian authors, is inappropriate, can cause confusion regarding its correct meaning, and is not related to the concept proposed by the AAPD. Since the adjective precoce means something that is premature, taking place before the normal time or occurring before the expected age, the use of the term cárie precoce na infância causes the misunderstanding that caries in the primary dentition is a disease that develops at a younger age than usual. Confusion is provoked by the meaning of the term early childhood, which designates the phase of human development encompassing the first years of life, that is, related to infants and preschoolers. Therefore, the term *cárie do lactente e do pré-escolar* (CLPE), used for the first time in Portuguese in our article,[2] is the most exact and appropriate translation because it defines the presence of this pathology in children up to 6 years old in an unmistakable manner.

The second important aspect is that Losso et al. stated that our study would have reported conflicting information about the cariogenicity of maternal milk.[1] Such statement is not correct, and the main conclusion of our study was not mentioned by these authors. In our review of the literature on the relationship between breastfeeding and ECC, we concluded that there is no evidence supporting the association between breastfeeding and development of caries. We also added that this relationship is complex and can be confounded by many variables, mainly infection with Streptococcus mutans, enamel hypoplasia, sugar intake, in its different forms, and social conditions, represented by parents' educational level and socioeconomic status.[2] We are proud to inform that our study has been recently considered by White[3] as one of the five studies showing relevant scientific evidence on the association between breastfeeding and ECC. In this study, White[3] clearly mentioned our conclusion and listed the possible limitations of our critical review. The author concluded that, due to the well-established benefits of breastfeeding and the lack of consistent evidence of its association with the occurrence of ECC, dentists should support the current recommendations of breastfeeding. The author also recommends that good dental hygiene practices should be emphasized after the eruption of the first tooth and that parents should be instructed to reduce the frequency of