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LETTERS TO THE EDITOR

Routine pacifier use in infants: pros and cons☆

Uso rotineiro de chupeta por bebês: prós e contras

Dear Editor,

We read with great interest the editorial ''Routine pacifier use in infants: pros and cons,''[1] which brought relevant information on the subject. However, the emphatic final recommendation on the routine use of pacifiers in breastfed infants, from our standpoint, deserves reconsideration.

There is strong evidence of the positive impact of breastfeeding on the health of children, lactating women, and the countries' economies.[2] Considering the low worldwide breastfeeding rates, especially of exclusive breastfeeding (EBF) among children under 6 months of age, researchers have aimed to identify risk factors that can be modified.[3] Among them is the use of pacifiers – a cultural habit, which can be modified. A systematic review of EBF risk factors in Brazil identified the use of pacifiers as the factor most strongly associated with EBF interruption (*i.e.*, 15 of the 16 studies that included the pacifier in their analytical models found this association).[4] However, we recognize that there are gaps in the understanding of the potential mechanisms, involved in this association.

Based on the best level of evidence, systematic reviews[5,6] and meta-analyses[7–9] that investigated the association between pacifier use and breastfeeding found divergent results. As described in the editorial, publications that included only randomized controlled trials (RCTs) did not observe any differences regarding the duration of breastfeeding in response to different pacifier interventions [5,8] (i.e., education to discourage pacifier use[10] *vs.* indication of use[11] *vs.* no use in the hospital, including the population of preterm infants[12] *vs.* delay in pacifier introduction up to 4 weeks of age[13]). It is noteworthy that factors that may influence the association between pacifier use and breastfeeding[7] were not controlled for in these RCTs. For instance, there was no systematization regarding the intensity of pacifier use, *i.e.*, ''regular'' use *vs.* ''partial'' use. Another example is that, in the review published in The Cochrane Library,[8] the RCTs samples consisted of mothers highly motivated to breastfeed (*i.e.*, committed to continue breastfeeding even in the face of multiple breastfeeding challenges) and one of the RCTs had a possible conflict of interest.[14] In view of these limitations and biases, we consider it premature to issue a recommendation categorically stating that pacifier use does not interfere with breastfeeding duration.

Aiming to advance the knowledge on the subject, we carried out a meta-analysis that inlcuded RCTs and observational studies, with comprehensive eligibility criteria, including no restriction of year and language of publication.[7] Considering the limitations of cross-sectional studies to establish causality, we favored the analysis of prospective observational studies, considering the use of pacifiers as a breastfeeding predictor. Based on 46 included publications, 14 of which were prospective observational studies, we concluded that pacifier use is associated with a shorter duration of EBF.[7] This type of evidence has raised concerns amongresearchers in the breastfeeding field and led them to search for innovative strategies to reduce pacifier use, as done in the study published by Giugliani et al.[15] We learned from that study that counseling sessions to promote breastfeeding with the involvement of family members (in this case, the grandmothers) can have a positive impact on the mothers' behavior change regarding pacifier use. As demonstrated by the same authors in previous publications,[16–18] this same intervention also had an impact on the increased frequency of breastfeeding. Consitent with this finding, an analysis of Brazilian population data, found that pacifier was the risk factor most strongly associated with the interruption of EBF between 1999 and 2008,[19] and also showed that the reduction of its use (17% in the period) contributed significantly to increasing the EBF rates (a 15% increase) during this nine-year period.[20] Considering the stagnation in breastfeeding indicators in Brazil, including EBF ,[21] simple and effective interventions based on modifiable risk factors, such as pacifier use reduction, may be crucial to promote breastfeeding.

In light of the available evidence, it is clear that the association between pacifier use and EBF interruption is complex, and may have components of cause, consequence, coincidence and be associated with the infant's personality and the profile of the mother and the family.[22] Consequently, recommendations for pacifier use vary globally.[23–26] Those who advocate the use of pacifiers do so for the prevention of sudden infant death syndrome (SIDS).[23,27] However, a recent systematic review concluded that there is no evidence from RCTs to support or reject pacifier use and, therefore, it is not

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possible to justify such a specific recommendations.[28] The sleep position[27] and breastfeeding itself, especially EBF,[29] have been identified as protective factors against SIDS. On the other hand, those who promote, protect, and support breastfeeding have been using a risk-benefit counseling approach on pacifier use, as suggested by the World Health Organization in their review of the 10 Steps of the Baby-Friendly Hospital Initiative (BFHI).[26] This recommendation was recently endorsed by the Brazilian Society of Pediatrics (Sociedade Brasileira de Pediatria [SBP]) with the publication of a report on the evidence of pros and cons regarding the use of pacifiers in breastfed children and how to work with families. The goal of this recommendation is to guide the advise of pediatricians and healthcare professionals, as well as the parents' choice, avoiding to simply recommend pacifier use for all.[30]

Finally, it is important to take into account the potential influence from industries, which make millions of dollars out of the sale of pacifiers,[31] and make strong efforts to promote their products and reinforce deeply engrained cultural practices that are not based on evidence.[32] Considering the balance between the pros (*e.g.*, reduction in SIDS, stimulation of non-nutritive sucking, pain management in the newborn, and modulation of the baby's agitated behavior) and cons (*e.g.*, changes in oral functions, sucking, breastfeeding, chewing and swallowing, dentition alterations, increased incidence of otitis media, increased SIDS as a result of shorter EBF duration, *etc.*) possibly related to pacifier use, we consider it important that healthcare professionals inform parents about the available evidence so they can make an individualized and informed decision, as proposed by the new BFHI recommendations.[26]

Conflicts of interest

The authors declare no conflicts of interest.

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Dear Editor,

My Editorial ''Routine pacifier use in infants: pros and cons,'' recently published in the March/April 2019 issue of Jornal de Pediatria,[1] highlighted the conflicting recommendation of the American Academy of Pediatrics (AAP) as opposed to the 10 Steps for Successful Breastfeeding advocated by the World Health Organization/United Nations Children Fund (WHO/UNICEF) regarding pacifier use. As noted, the AAP recommends routine use of pacifiers at sleep time once breastfeeding is established (usually by 3–4 weeks of age)[2] as opposed to the WHO/UNICEF categorical step 9 of the 10 Steps guideline, which stated: ''Give no artificial teats or pacifiers to breastfeeding infants.''[3]

It is important to note that, since my writing of the Editorial, the WHO/UNICEF 10 Steps program has been revised; step 9 now states ''Counsel mothers on the use and risks of feeding bottles, teats and pacifier''.[4]

While not endorsing the routine use of pacifiers, this still somewhat unbalanced statement clearly retrenches from the previous categorical ban and is more consistent with the consensus (as noted in my Editorial) that the benefits of routine use of pacifiers in reducing the risk of SIDS and in enhancing a calming effect on infant behavior outweigh any theoretical unproven risks.

Conflicts of interest

The author declares no conflicts of interest.

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