How Are Effective Breastfeeding Technique and Pacifier Use Related to Breastfeeding Problems and Breastfeeding Duration?

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Abstract: Background: Inconsistent findings leave uncertainty about the impact of pacifier use on effective breastfeeding technique. The purpose of this study was to investigate how breastfeeding technique and pacifier use were related to breastfeeding problems and duration of breastfeeding.

Methods: Data were collected from the intervention group of a randomized trial in which health visitors followed up with mothers for 6 months after childbirth. The health visitors classified the breastfeeding technique at approximately 1 week after birth and repeated the observation if a correction was necessary. Effective technique included positioning, latch, sucking, and milk transfer. Data on breastfeeding problems and pacifier use were obtained from self-reported questionnaires. The study population included 570 mother-baby pairs with complete information on breastfeeding technique and pacifier use. The primary outcome was duration of exclusive breastfeeding.

Results: One-half of the mothers showed ineffective breastfeeding technique at the first observation, most frequently ineffective position (61%) and latch (52%). In the unadjusted analysis, only sucking and milk transfer were associated with breastfeeding duration. In the adjusted analysis, ineffective technique was significantly associated with mothers reporting early breastfeeding problems, which thereby influenced the breastfeeding duration. Pacifier use had an independent negative impact on duration of breastfeeding. A single correction of the breastfeeding technique was not associated with duration or occurrence of problems.

Conclusions: Observation of breastfeeding technique may help mothers in the stage of when they are establishing breastfeeding to avoid early and later problems, but breastfeeding technique is less useful in predicting breastfeeding duration. Use of a pacifier should be avoided in the first weeks after birth. (BIRTH 36:1 March 2009)

Key words: breastfeeding, postpartum period, sucking behavior, nursing assessment, pacifier

The short- and long-term health benefits that breastfeeding confers on the child are well documented (1). Therefore, primary health promotion begins at the breast. An effective sucking technique is considered important to establish breastfeeding, to ensure milk transfer, and to prevent breastfeeding problems (2–4). The baby’s positioning, latch, and sucking behavior at the mother’s breast define this effective technique (5).

For 20 years, the mechanics of effective sucking technique has primarily been explained as the baby...
expels the affluent milk from the lactiferous sinuses beneath the areola (6,7). However, recent studies question the existence of the lactiferous sinuses and point to the influence of the vacuum the baby establishes and milk ejection as important factors for the baby’s milk consumption (8–10).

An intervention study published in 1992 found that mothers whose ineffective breastfeeding technique was identified and corrected had a longer duration of breastfeeding (11). Recently, two randomized studies that investigated the impact of effective breastfeeding technique education were unable to confirm any effect on breastfeeding duration (12,13).

Two other publications reported that pacifier use combined with superficial sucking technique led to early breastfeeding cessation and breastfeeding problems (14,15). Observational studies have subsequently found pacifier use associated with less frequent breastfeeding and shorter breastfeeding duration (16–19), whereas a randomized study in which mothers in the intervention group successfully avoided pacifier use showed no effect on weaning (20).

The lack of scientific data and inconsistency of findings among breastfeeding studies leave uncertainty about the impact and associations of effective breastfeeding technique and pacifier use on breastfeeding duration. The present study is based on data from mothers included in the intervention group of a cluster-randomized trial, aimed at prolonging the breastfeeding period (21). In this group, but not in the comparison group, we collected data on breastfeeding technique in connection with observing and guiding breastfeeding mothers in effective breastfeeding technique. The purpose of this study was to investigate how breastfeeding technique and pacifier use were related to breastfeeding problems and duration of breastfeeding.

**Methods**

**Setting and Participants**

The trial took place in western Denmark, where health visitors routinely visit families with newborns shortly after discharge from the maternity ward. Health visitors are registered nurses with 1 year of supplementary training. In Denmark, nearly 98 percent of all deliveries take place in hospitals. The five hospitals serving the study area had adopted the standards of the Baby Friendly hospital initiative (22). Primiparas and mothers who had a cesarean section usually stayed in the hospital for 4 days, whereas multiparas without complications returned home within 24 hours after the delivery.

Mothers were enrolled in a 6-month period from February 2004, and followed up for 6 months (26 weeks) from time of delivery. All Danish mothers who lived in the study region, who gave birth to a single child with a gestational age of 37 or more completed weeks, and who started breastfeeding were invited to participate. Exclusion criteria included mothers with an ethnic background other than Danish, and mothers who had a preterm or twin birth.

**Procedures**

Before the trial, all health visitors except one participated in an 18-hour training course that was developed for the trial, based on the World Health Organization’s Breastfeeding Counselling: A Training Course (23). It included sessions about how to observe effective breastfeeding technique and perform skills training with the breastfeeding mother to achieve effective breastfeeding technique (21).

At the first visit, which took place approximately 8 days after birth, the health visitor observed a breastfeeding session and confirmed the mother’s use of an effective breastfeeding technique. Mothers who used an ineffective breastfeeding technique were corrected by means of guided practice and feedback, and then observed in a second breastfeeding session.

**Data Collection, Questionnaires**

Data were collected from both the mothers and the health visitors, who recruited mothers for the trial. The health visitor filled out a registration form for every mother who fulfilled the inclusion criteria, and followed up with those who agreed to participate for 6 months. The observed breastfeeding technique was registered by means of answers to standardized questions. Data about weeks of exclusive breastfeeding were obtained from regular contacts with the mother.

The mothers answered two anonymous, self-administered questionnaires, the first at the health visitor’s first visit, which was on average returned 16 days after birth, and the second handed out or sent to the mothers approximately 5 months after the birth. The first questionnaire included sociodemographic questions, maternal questions about previous breastfeeding experience, current breastfeeding concerns, and infant questions about growth and pacifier use. The second questionnaire had questions related to problems during the breastfeeding period and the service received from the health visitor. As
part of the trial preparations, all questionnaires were reviewed by four experts and subsequently tested for content and face validity by 24 mothers.

**Study Variables**

The primary study variables were effective breastfeeding technique and pacifier use. Mothers’ perceptions of early problems related to breastfeeding were included as a secondary study variable. Effective breastfeeding technique included the following factors: positioning, latch, sucking, and milk transfer (5). Position was measured by two questions: 1) Is the baby positioned with its stomach close to the mother’s stomach? 2) Are the head and body in line? Latch was measured by three questions: 3) Is the mouth wide open? 4) Does the chin touch the breast? 5) Is the under lip flanged out and placed with a good part underneath the breast? Sucking and milk transfer were measured by two questions: 6) When onset of milk occurs, does the sucking rhythm change to deep rhythmical sucks? 7) Is swallowing audible?

During the observation of a breastfeeding session, the health visitors registered a “yes” or “no” to each of these questions. An effective breastfeeding technique was defined as a “yes” response to all seven questions.

Information on use of a pacifier and early breastfeeding problems during the first 2 weeks was obtained from the mothers’ first questionnaire, which included the questions: “Does the baby use a pacifier?” and “Have you had problems breastfeeding?” with response categories of “yes” or “no.”

Table 1. Sociodemographic and Perinatal Characteristics of 579 Mother-Child Pairs and Their Associations with Effective Breastfeeding Technique and Pacifier Use

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Effective Breastfeeding Technique&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Pacifier Use&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes (n = 302)</td>
<td>No (n = 277)</td>
</tr>
<tr>
<td><strong>Sociodemographic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age (yr)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15–29</td>
<td>146</td>
<td>141</td>
</tr>
<tr>
<td>30–46</td>
<td>156</td>
<td>135</td>
</tr>
<tr>
<td>Duration of schooling (yr)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7–10</td>
<td>82</td>
<td>83</td>
</tr>
<tr>
<td>&gt; 10</td>
<td>218</td>
<td>189</td>
</tr>
<tr>
<td>Vocational training</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None—short</td>
<td>160</td>
<td>168</td>
</tr>
<tr>
<td>Intermediate—long</td>
<td>139</td>
<td>103</td>
</tr>
<tr>
<td>Parity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primiparous</td>
<td>109</td>
<td>123</td>
</tr>
<tr>
<td>Multiparous</td>
<td>193</td>
<td>154</td>
</tr>
<tr>
<td><strong>Perinatal conditions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participation in prenatal classes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>157</td>
<td>153</td>
</tr>
<tr>
<td>No</td>
<td>144</td>
<td>118</td>
</tr>
<tr>
<td>Hospitalization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Birth at home</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Handled on an outpatient basis</td>
<td>111</td>
<td>88</td>
</tr>
<tr>
<td>Hospitalized—rooming-in 24 hr</td>
<td>181</td>
<td>174</td>
</tr>
<tr>
<td>Formula supplement, within 5 days after birth</td>
<td>206</td>
<td>166</td>
</tr>
<tr>
<td>Babies not given formula</td>
<td>91</td>
<td>100</td>
</tr>
<tr>
<td>Babies given formula</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length of previous breastfeeding experience (wk)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0–5</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>6–17</td>
<td>61</td>
<td>73</td>
</tr>
<tr>
<td>&gt; 17</td>
<td>112</td>
<td>56</td>
</tr>
<tr>
<td>Birthweight (g)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum to 3,599</td>
<td>121</td>
<td>126</td>
</tr>
<tr>
<td>3,600 to maximum</td>
<td>177</td>
<td>150</td>
</tr>
</tbody>
</table>

<sup>a</sup>Number of initial observations of effective breastfeeding technique from health visitors’ registration forms.

<sup>b</sup>Number of answers from mothers’ questionnaire 1.

<sup>c</sup>Pearson chi-squared, p value.
Outcome Variables

The primary study outcome was the duration of exclusive breastfeeding in weeks. Exclusive breastfeeding was defined as a child being fed only on mother’s milk (24).

The secondary outcome was the mother’s perception of problems related to the breastfeeding period. In the second questionnaire, mothers were asked if they had encountered specific breastfeeding problems in the period from week 3 until week 17 after delivery. The specific problems were pain related to breastfeeding, poor attachment, damaged nipples, blocked ducts, and mastitis. The response categories for each problem were “yes” or “no.”

Statistical Methods

Associations between maternal characteristics and each of the study variables were assessed by chi-square tests. A variable was considered as a potential confounder if it was associated with one of the study variables and with breastfeeding duration.

The duration of exclusive breastfeeding was described by survival curves calculated by the Kaplan-Meier method. Log-rank tests were used for comparison of survival curves. Mothers who moved out of the area were censored at the time of change of address. Cox regression analyses were used to evaluate the influence of study variables on the duration of exclusive breastfeeding. The effect was described by a hazard ratio (HR) with a 95% confidence interval.

A logistic regression analysis with early breastfeeding problems as the dependent variable was used to further clarify if early breastfeeding problems mediated the influence of the primary study variables on breastfeeding duration. The effect of effective breastfeeding technique was here stratified on pacifier use and described by an odds ratio with a 95% confidence interval.

Similar methods were used to evaluate the effect of correction of breastfeeding technique on the duration of breastfeeding and on the presence of breastfeeding problems. These analyses included only mothers who had a second observation after correction. The level of significance was chosen as 5 percent. Stata version 8 was used for all statistical analyses (25).

Results

In the intervention area, 1,066 mothers gave birth in the recruitment period, 870 mothers fulfilled the inclusion criteria, and 780 of these mothers agreed to
participate. The 579 mothers who had complete information on effective breastfeeding technique and pacifier use formed the study population of this study. Breastfeeding information was available for an additional 201 mothers, who had no data on breastfeeding observation (150) or pacifier use (70). No statistically significant difference in breastfeeding duration was seen between these women and the women included in the study.

Table 1 provides baseline information on maternal sociodemographic and perinatal characteristics and how these related to observed effective breastfeeding technique and reported pacifier use. Forty percent of the participating mothers were primiparous. The previous breastfeeding experiences of the multiparous mothers were, on average, 16.8 weeks (SD = 8.5 wk). Fifty-two percent of the mothers were initially identified to have an effective breastfeeding technique, 64 percent reported that their babies used a pacifier, and 40 percent had early problems in relation to breastfeeding. The use of a pacifier was not related to effective breastfeeding technique \((p = 0.99)\). Table 1 presents associations between study variables and maternal characteristics. These results identified education, parity, and previous breastfeeding experience as potential confounding factors, because they are known also to be associated with the duration of breastfeeding.

In the crude analysis, we found that duration of breastfeeding was longer for mothers with effective breastfeeding technique at the first observation \((p = 0.003)\) compared with mothers who were shown to have ineffective technique, for mothers who did not use a pacifier \((p < 0.001)\) compared with mothers who reported using a pacifier, and for mothers who did not report early problems compared with mothers who reported early problems \((p < 0.001)\) (Fig. 1; Table 2). The increased risks of cessation associated with pacifier use and early problems were essentially unchanged when evaluated simultaneously and adjusted for confounding factors, but the risk associated with ineffective breastfeeding was reduced considerably and was no longer statistically significant in the adjusted analysis. Further analysis showed that it was the correction for early problems and confounding factors, and not the correction for pacifier use, that reduced the risk associated with ineffective breastfeeding, whereas the risk associated with pacifier use was unchanged when correction was made for the effect of early problems (Table 2).

The mediating role of early breastfeeding problems on the cessation of risk was further clarified by a logistic regression analysis with the presence of early breastfeeding problems as the outcome (Table 3). Ineffective breastfeeding technique was associated

Fig. 1. Proportion of exclusive breastfeeding in relation to effective breastfeeding technique, pacifier use, and reported breastfeeding problems as a function of time since delivery. Text next to curves refers to categorization.
with a statistically significant increase of the risk of early problems. The increase associated with pacifier use was somewhat smaller and not statistically significant. Further analysis showed that no interaction was present between the effect of the two risk factors \(p = 0.996\), and assuming independent effects the adjusted odds ratios associated with ineffective technique and pacifier use were 2.33 (95% CI 1.60–3.38) and 1.41 (95% CI 0.96–2.10), respectively.

The presence of early breastfeeding problems was strongly associated with perceived problems later in the follow-up period. These problems included pain when breastfeeding (OR 6.83, 95% CI 3.48–13.40), poor attachment (OR 10.31, 95% CI 3.42–31.13), and damaged nipples (OR 6.61, 95% CI 3.12–14.00).

A total of 277 mothers were classified as having an ineffective breastfeeding technique at the health visitor’s first observation. In particular, ineffective position was observed for 169 mothers, ineffective latch for 144 mothers, ineffective sucking for 45 mothers, and ineffective milk transfer for 41 mothers. All these factors had a statistically significant impact on the presence of early problems \(p < 0.001\), but their consequences for the duration of breastfeeding differed. Ineffective position and ineffective latch had no influence (HR 1.03, 95% CI 0.86–1.25; HR 1.19, 95% CI 0.98–1.45), whereas ineffective sucking and ineffective milk transfer showed a significant impact on duration of breastfeeding (HR 1.87, 95% CI 1.38–2.55, and HR 1.78, 95% CI 1.29–2.45, respectively).

After the second observation, 123 (44%) mothers were classified as having effective breastfeeding technique and 108 (39%) ineffective breastfeeding technique. A second observation was not available for the remaining 46 (17%). The result of the second

### Table 3. Logistic Regression Analysis of Pacifier Use and Breastfeeding Technique Associated with Reported Early Breastfeeding Problems, Unadjusted and Adjusted for Confounding Factors

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Crude ((n = 574))</th>
<th>(\text{OR} (95% \text{ CI}))</th>
<th>(p)</th>
<th>Adjusted (^b) ((n = 550))</th>
<th>(\text{OR} (95% \text{ CI}))</th>
<th>(p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonpacifier users with effective BF(^c)</td>
<td>108</td>
<td>1.00 reference</td>
<td></td>
<td>1.00 reference</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonpacifier users with ineffective BF(^c)</td>
<td>99</td>
<td>2.44 (1.36–2.39)</td>
<td>0.003</td>
<td>2.34 (1.25–4.36)</td>
<td>0.008</td>
<td></td>
</tr>
<tr>
<td>Pacifier users with effective BF(^c)</td>
<td>194</td>
<td>1.33 (0.78–2.24)</td>
<td>0.294</td>
<td>1.42 (0.81–2.47)</td>
<td>0.219</td>
<td></td>
</tr>
<tr>
<td>Pacifier users with ineffective BF(^c)</td>
<td>178</td>
<td>3.23 (1.91–5.46)</td>
<td>0.000</td>
<td>3.31 (1.88–5.80)</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

\(\text{aNumber of observations from health visitors’ registration form and mothers’ report in questionnaire 1, missing values excluded.}\)

\(\text{bConfounding factors: education, earlier breastfeeding experience, and formula supplement within 5 days after birth.}\)

\(\text{cInitial observations of effective breastfeeding technique.}\)

B = breastfeeding.

### Table 4. The Influence of Ineffective Breastfeeding Technique in Second Observation on the Duration of Breastfeeding and Breastfeeding Problems. Crude and Adjusted Estimates from Cox Regression Analysis (Duration) and from Logistic Regression Analysis (Problems) Stratified on Pacifier and Nonpacifier Users

<table>
<thead>
<tr>
<th>Characteristics for Mothers after Correction</th>
<th>Breastfeeding Duration(^b)</th>
<th>Breastfeeding Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hazard Ratio ((n = 231))</td>
<td>OR ((n = 228))</td>
</tr>
<tr>
<td></td>
<td>Crude (95% CI)</td>
<td>Adjusted (95% CI)</td>
</tr>
<tr>
<td>Nonpacifier users</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mothers with effective BF(^c)</td>
<td>42</td>
<td>1.00 reference</td>
</tr>
<tr>
<td>Mothers with ineffective BF(^c)</td>
<td>40</td>
<td>1.26 (0.80–1.98)</td>
</tr>
<tr>
<td>Pacifier users</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mothers with effective BF(^c)</td>
<td>81</td>
<td>1.25 (0.85–1.84)</td>
</tr>
<tr>
<td>Mothers with ineffective BF(^c)</td>
<td>68</td>
<td>1.60 (1.07–2.38)</td>
</tr>
</tbody>
</table>

\(\text{aNumber of second observation from health visitors’ registration form, and mothers’ report in questionnaire 1, missing values excluded.}\)

\(\text{bConfounding factors: education, earlier breastfeeding experience, and formula supplement within 5 days after birth.}\)

\(\text{cSecond observation of effective breastfeeding technique, after initial observation and correction}\)

B = breastfeeding.
observation showed no significant differences in breastfeeding duration among groups (Table 4). The crude risk of breastfeeding cessation was increased in mothers who still had ineffective breastfeeding technique after correction and also used a pacifier (HR 1.60, 95% CI 1.07–2.38), but the excess risk was reduced and no longer statistically significant when adjusted for potential confounders. Further analysis showed no interaction between the effects of the two risk factors ($p = 0.718$). The independent effects of ineffective technique and pacifier use were also not statistically significant (result not shown). The results for early breastfeeding problems were similar (Table 4).

Discussion

Data on effective breastfeeding technique were collected systematically from health visitors after instruction from the training course. Data on early problems and pacifier use were based on mothers’ self-reports and collected at an early stage, independently of the breastfeeding duration. The procedure reduced the risk of recall bias and ensured that data have a predictive value.

The use of self-reported data may be a limitation of the study. A positive response to questions on early breastfeeding problems and pacifier use reflected the subjective interpretation of the individual mother. However, we found a strong connection between mother’s evaluation of early problems and later breastfeeding problems collected in the second questionnaire in the follow-up period. Pacifier use is accepted in Denmark, but underreporting is possible because mothers know that health professionals recommend avoiding pacifier use. Furthermore, we lack data about the level of pacifier use. Generally, misclassification of the study variables is most likely to be nondifferential since data from mothers were collected independently and before outcome data.

We found that ineffective breastfeeding technique was strongly associated with breastfeeding problems, which is consistent with earlier findings by Richard and Alade (11,15). Unadjusted associations between ineffective breastfeeding and shorter breastfeeding duration were also reported by Richard and Alade (11), but our multivariate analysis indicated that ineffective sucking technique led to breastfeeding problems that subsequently influenced breastfeeding duration. The findings support the recommendation that health professionals should be attentive to mothers’ breastfeeding technique because ineffective breastfeeding technique is related to early and later breastfeeding problems.

Santo et al also reported a large number of mothers with ineffective breastfeeding technique at an initial observation (26). Of the four observed factors, only effective sucking and effective milk transfer showed a significant impact on the duration of breastfeeding in the unadjusted analysis. Milk transfer, measured as audible swallowing, was also the variable that Riordan et al (27) found significantly related to human milk intake more than 96 hours after birth, suggesting that milk transfer is the most valuable indicator for an effective breastfeeding technique. Sucking, measured as deep rhytmical sucking, may be another indicator for an effective breastfeeding technique when the definition, unlike that used in the study of Riordan et al (27) is associated with a change in sucking related to the onset of milk. The suggested indicators include active processes from the mother and the baby, both of which play a significant role in milk removal, according to a study by Ramsay et al (9).

Our results indicate that ineffective position and latch contribute to early breastfeeding problems, but do not have a direct association with breastfeeding duration. Several assessment tools for effective breastfeeding technique, which include these two factors (28–31), show only modest or no evidence for correlation with breastfeeding duration (32,33). In agreement with our findings, Schlomer et al (34) reported a higher score on two of the assessment tools associated with more breastfeeding problems.

Most mothers in our study used a pacifier for their children, and in accordance with other studies, we found that this use was negatively associated with breastfeeding duration (16,17,19,35). Moreover, in accordance with Binns and Scott (17), we found pacifier use had an independent impact on breastfeeding duration, not mediated by ineffective breastfeeding technique or breastfeeding problems. A significant association between ineffective breastfeeding technique and pacifier use has been reported (15, 16), and Aarts et al (19) described a reduced number of breastfeeding meals in connection with pacifier use. These associations were not present in our study. According to our results, early pacifier use and ineffective breastfeeding technique created different problems for the breastfeeding mother, and if both factors were present, the risk of premature breastfeeding cessation was further increased.

A single correction of the ineffective breastfeeding technique apparently had no or only little influence on breastfeeding duration and did not solve the problem. These findings are in agreement with results from two randomized trials (12,13) that showed no effect on breastfeeding duration or nipple trauma after mothers received postpartum education.
in positioning and attachment. In addition, Wallace et al (36) found no effect of the “Hands Off” intervention, designed to facilitate the achievement of correct positioning and attachment by mothers and babies for effective feeding. Prolonged guidance may be necessary if correction is needed. Moreover, the absence of positive results from such correction supports efforts to prevent ineffective breastfeeding technique.

Recent studies have pointed to the importance of early skin-to-skin contact for mother and newborn and the baby’s self-attachment to the breast (37,38). Self-efficacy and confidence have recently been identified as important markers for the breastfeeding experience (39–42). Ideal or rigid descriptions for effective technique may reduce a mother’s confidence in the breastfeeding process.

The results of our study are based on representative data from a Caucasian population in an affluent Western society with a strong tradition for breastfeeding. The process of observing the breastfeeding couple is universally applicable according to the World Health Organization (23), but since mothers’ interpretation of breastfeeding problems may depend on cultural factors, the findings may not be generalizable to other populations.

Conclusions

Our results indicate that observation and confirmation of breastfeeding technique may be important to help mothers in the stage when they are establishing breastfeeding to avoid early and later problems, but breastfeeding technique is less useful to predict breastfeeding duration. Pacifier use is independently associated with a shorter duration of exclusive breastfeeding and should be avoided in the first weeks after birth by mothers who want to breastfeed.

References


