Breast-feeding

Early enhancement of successful breast-feeding

Lennart Righard

Fifty-two healthy mother–infant pairs were referred to the paediatric clinic of Malmö General Hospital because of nursing problems. Observation of nursing behaviour showed that almost all these problems were connected to incorrect sucking technique. Only three of the infants sucked correctly, with mouth wide open and tongue under the areola. In a control group of 40 mother–infant pairs without nursing problems, 36 sucked correctly. The introduction of a bottle and the use of pacifiers seemed to interfere with the course of normal nursing.

In societies where breast-feeding is regarded as a natural physiological function and the only way to nourish an infant, and where it is highly valued and therefore strongly encouraged and supported, breast-feeding problems seldom occur. This contrasts with the Western experience, in which during the 1960s and 1970s breast-feeding was quite often a painful and onerous procedure for the mother, sore nipples and insufficient milk being common problems which made it hard to maintain breast-feeding for more than a couple of months. Among the reasons for terminating breast-feeding were insufficient milk, anxiety, lack of motivation, stress, inconvenience, interference with work or studies, and tiredness (1). Commenting on the problems which may arise, two leading breast-feeding experts, Chloe Fisher in Oxford and Kittie Frantz in Los Angeles, stressed the importance of correct positioning of the infant at the breast and a correct sucking technique to avoid nursing problems (2, 3). Independently of each other, Fisher and Frantz had observed that problems arose when the baby sucked superficially just on the nipple and not on the breast.

The present study was conducted in order to investigate the relationship of sucking technique to breast-feeding problems of any kind, and to ascertain whether the view of Chloe Fisher and Kittie Frantz that a faulty nursing pattern is the main reason for nursing problems is true, or at least consistent with our previous findings (4, 5).

Procedures

The study group consisted of 52 healthy mother–infant pairs referred by nurses at local Child Health Clinics in Malmö to the Department of Paediatrics at Malmö General
Hospital because of nursing problems. The mothers ranged in age from 21 to 38 years (mean, 29.3 ± 4.6 years), and the infants from 1 week to 17 weeks (median, 5 weeks). A history was taken and the breast-feeding problems were listed in detail. A breast feed was observed, and in the case of faulty sucking technique the nursing pattern was immediately corrected. Advice was given as necessary, and mothers were advised to avoid bottle-feeding. Subsequent follow-up comprised a total of 171 contacts (2–5 per mother–infant pair), 91 by telephone and 80 by personal interview. Each case was followed for at least a month or until a feeding routine had been established.

As a control group, 40 consecutive nursing pairs without breast-feeding problems were observed at routine check-ups for weight and size at a Child Health Clinic in Malmö. There were no differences between the problem group and the control group with regard to maternal age, and coffee-drinking or smoking habits. The median age of the infants in the control group was 4 weeks (range, 1 to 32 weeks) and did not differ significantly from that of the problem group.

The oral searching reflex (Fig. 1) is conducive to a correct sucking technique which was defined as the infant having a wide-open mouth, with the tongue under the areola, and expressing milk from the breast by slow, deep sucks (Fig. 2). Manipulation of the nipple into the baby’s mouth is conducive to a faulty technique which was defined as superficial nipple sucking.

The chi-squared test with Yates’ correction was used for statistical analysis of the data. *P* values < 0.05 were considered statistically significant.

**Findings**

Of the 52 mother–infant pairs with breast-feeding problems, 49 (94%) had a nursing pattern of incorrect, superficial nipple-sucking at referral to the paediatric clinic, as compared to four (10%) of the 40 controls without nursing problems (*P*=0.0001)

![Fig. 1](image1.jpg)

*A baby actively taking the breast (correct)*

![Fig. 2](image2.jpg)

*A baby latched on properly*

(Courtesy of Oxford Medical Illustration, John Radcliffe Hospital, Oxford, England.)
Breast-feeding

(see table). In the three cases with nursing problems but a correct technique, the problems were milk congestion (stasis due to an unsuitable brassière), irritability of the infant after feeds (partly breast-fed), and frequent feeds (mother on oral contraceptives and a smoker). In the control group, there were four infants with a faulty sucking pattern but no problems. These four infants were all less than one month old.

In the study group with breast-feeding problems 73% used pacifiers, as compared to 30% in the control group with no problems \( (P=0.003) \). Of the pacifier users as a whole, 73% had a superficial nipple-sucking technique compared to 41% among those not using a pacifier \( (P=0.016) \).

More mothers in the study group (73%) were primiparae than in the control group (47%, \( P < 0.05 \)). Allergic disease in the parents was more common in the study group (53%) than in the control group (30%, \( P < 0.05 \)). Of mothers in the study group, eight were heavy coffee drinkers (six or more cups a day), and seven of these had restless babies, but this subgroup was too small for meaningful statistical analysis; five mothers were heavy smokers (10 or more cigarettes a day). Marital status was not a pertinent factor.

In order of frequency, the most common problems in the study group reported by the mothers at referral were: the baby was restless nutrition (23%), prolonged feeds (17%), frequent feeds (12%), slow weight gain (12%), necessity of breast shield (12%), infant's stools watery (10%), milk insufficiency (8%), necessity of breast pumping (8%), and breast engorgement, the baby had difficulties in grasping the breast properly, colic, or inadequate support from health-care professionals (4% each).

At referral, 63% of the study group were breast-feeding exclusively, a supplementary bottle had been introduced in 29% of cases, and 8% of the mothers were using a breast pump and giving their own milk by bottle. One mother had already decided to stop breast-feeding.

At follow-up after a month or more, when the feeding routine had become established, 38% reported no nursing problems, 37% reported improvement, and 25% reported no improvement; 56% were breast-feeding exclusively, 27% were using mixed feeding, 2% were using a breast pump, and 15% had stopped breast-feeding; 12% had stopped bottle-feeding when encouraged to do so at referral, whereas others (19%) had introduced bottle-feeding during the interim.

With regard to the continuation of breast-feeding (at least until the subsequent follow-up), the outlook was poorer for infants who had already been started on supplementary bottle-feeding when referred to the paediatric clinic.

**Of the 52 mother-infant pairs with breast-feeding problems, 49 (94%) had a nursing pattern of incorrect, superficial nipple-sucking at referral to the paediatric clinic.**

<table>
<thead>
<tr>
<th>Breast-feeding problems and sucking patterns in breast-fed infants aged 2 weeks to 6 months old</th>
<th>Total number of mothers</th>
<th>Sucking technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast-feeding problems</td>
<td>52</td>
<td>Correct</td>
</tr>
<tr>
<td>No problems</td>
<td>40</td>
<td>Incorrect</td>
</tr>
</tbody>
</table>

\( P = 0.0001 \)
clinic than for those who had not. Of the infants who had started supplementary bottle-feeding before referral, 31% (6/19) had terminated breast-feeding at follow-up, as compared to 6% (2/33) of those still exclusively breast-feeding at referral ($P=0.04$).

**Implications**

An incorrect sucking technique (i.e. nipple sucking) was much more common among mother–infant pairs with nursing problems of any kind (including babies restless between feeds) than among those breast-feeding without problems (94% vs. 10%, $P=0.0001$). Thus an incorrect sucking pattern seems to be the main cause of nursing problems. This confirms the previous observations (2, 3, 5).

Infants who had already been introduced to a bottle before referral were less likely to be still breast-feeding at subsequent follow-up one month or more later. There are several possible explanations for this. Infants accustomed to bottle-feeding at an early stage might develop a preference for the bottle teat. Another possible explanation is that stimulation of milk production by the sucking of the infant will be less effective as soon as a bottle is introduced. The mother will soon become accustomed to bottle-feeding and she will be influenced by exposure to advertisements for bottle-feeding products.

In a previous study (5) we showed that mother–infant pairs using pacifiers stopped breast-feeding earlier than non-users, a finding subsequently confirmed by Victora et al. (6). In the present study and in our previous one, regular use of a pacifier was more common among those with breast-feeding problems. We discussed nipple confusion (3) and whether the sucking on a pacifier with the mouth opened a little made it difficult for some children to switch to grasping the breast with wide-open mouth. A noteworthy finding in the present study was that infants using pacifiers more often had a superficial nipple-sucking pattern when breast-feeding than non-users ($P=0.016$). Another reason for decreasing breast-feeding rates among pacifier users (6) might be that getting used to sucking on an alien elastic object as a pacifier might make it difficult for some infants to accept the soft tissue of the breast. Many parents will have experienced their child having refused a new pacifier the tactile properties of which are unfamiliar to the child and different from the old and well-used pacifier. Victora et al. discuss a few other possible explanations in their article (6).

The majority of mothers with nursing problems were primiparae. It seems reasonable that a mother with her first baby is more inclined to ask for professional help when troubles arise than an experienced mother. Parity per se is not a determinant of breast-feeding rates, whereas previous breast-feeding experience is.

The fact that there were more parents with allergy in the problem group merits consideration. The Swedish Paediatric Society and the National Board of Health and Welfare recommend breast-feeding as prophylaxis for allergic disease. It is well known among Swedish parents that breast-feeding is supposed to prevent the occurrence of allergy, and this may explain why hereditary allergy was so common among mothers who sought professional help for their nursing problems. It might also
be a stress factor to the mother that breast-feeding is recommended in order to avoid future allergy in the child; that is, she might feel under pressure to succeed.

Why do breast-feeding problems seldom occur in non-Western societies where the children are nursed for 2–3 years? In these societies the mother carries her baby in close contact all day long, and sleeps with her baby at night. The baby takes the breast at will—the mother simply makes her breast available, and the baby does the rest. If a baby actively latches on, the oral searching reflex will come into play; the baby will thrust the tongue forward, take the breast with wide open mouth and suck with slow deep sucks. Western mothers tend to make their babies passive by putting the nipple into the mouth, which is conducive to nipple sucking. They would do well to rely upon their babies’ own ability to get nourishment by their own efforts. The baby should be allowed to finish the first breast, and if still hungry, be offered the second breast as well. It is salutary to observe how mammals in general let their offspring do the searching and latching on themselves, and unless danger threatens often allow them to feed undisturbed until they are satisfied and relinquish the teat of their own accord.

Many of the common problems might never arise if infants were left undisturbed on the mother’s abdomen after delivery, to enjoy the intimacy of skin contact with her until they take the breast by their own efforts. In a previous study concerning delivery room practices, we showed that an incorrect sucking technique was often the result of early separation for weighing and measuring during the first hour after birth; maternal medication was another adverse factor. Where separation after delivery is unavoidable for medical reasons, the infant can nevertheless be stimulated to suck actively and correctly in the maternity ward. A faulty sucking pattern could easily be corrected at this early stage, as was shown in another study. In this previous study, where sucking technique was investigated in the maternity ward, we showed correct technique to be prognostic of long-term success in breast-feeding. After four months, more mother–infant pairs with an incorrect technique from the start had breast-feeding problems, and had stopped breast-feeding early, than pairs with a correct technique.

Attempting to breast-feed in spite of nursing problems and then trying to have these problems corrected can be a tiresome, discouraging and sometimes painful process (e.g. where nipple lesions are involved). The first weeks after delivery entail enough extra demands upon the parents, particularly the mother, without the added stress of nursing problems. It would be preferable to forestall the occurrence of breast-feeding problems by making adequate help available to the mother and infant in the delivery room and in the maternity ward. This can be done, for instance, by avoiding medication for the mother during labour as much as possible, not separating the mother and infant, stimulating the infant to take the breast actively, and observing breast-feeding patterns before discharge. The infant should be carried in a soft cloth close to the mother for the better part of the first year. One should avoid the extensive use of a pacifier, as there is an inverse correlation between pacifier use and breast-feeding duration.

Although faulty sucking technique can be corrected later on, the findings of this study suggest that late results are not always optimal.
suggest that late results are not always opti-
mal, particularly if supplementary bottle-
feeding has already been introduced before
remedial measures are taken. It would seem to
be preferable to opt for early prevention
rather than late intervention. Early prevention
entails the adoption of hospital routines
that do not interfere with the delicate mother–
infant bonding process. The joint WHO/
UNICEF Baby-friendly Hospital Initiative
is an example of an approach to the early pre-
vention of breast-feeding problems by promot-
ing appropriate maternity service routines.

References
1. Sjölin S et al. Factors related to early termination of
breast-feeding (a retrospective study in Sweden).

2. Fisher C. Breast-feeding, a midwife’s view. Journal of

3. Frantz KB, Fleiss PM. Ineffective suckling as a fre-
quent cause of failure to thrive in the totally breast-fed
biological and social value. International Symposium
on Breast Feeding, Tel Aviv, 1980. (International
Congress Series 518). Amsterdam, Excerpta Medica,

4. Richard L, Alade M. Effect of delivery room routines
on success of first breast-feed. Lancet, 1990, 336:
1105–1107.

5. Richard L, Alade M. Sucking technique and its effect
on success of breastfeeding. Birth, 1992, 19:
185–189.

6. Victoria CG et al. Use of pacifiers and breastfeeding

7. Anisfeld E et al. Does infant carrying promote
attachment? An experimental study of the effects
of increased physical contact on the development
of attachment. Child development, 1990, 61:
1617–1627.

---

Women’s income

Studies highlight the fact that women’s earnings not only increase the
aggregate income levels of the poorest households, but that they also
contribute a much larger share to basic family maintenance. Increases in
female earning power translate more directly into better child health and
nutritional status, with important short-term effects of reducing the inci-
dence and severity of morbidities at household level and positive long-
term generational effects on the quality of human capital. The enhance-
ment of women’s economic productivity is, therefore, to be regarded as
an important strategic necessity for improving the condition of those in
poverty.

---

World Health Forum • Volume 17 • 1996