INVITED COMMENTARIES

Factors associated with the duration of breastfeeding may depend on the extent to which mothers of young children are employed

T Greiner

Department of Women's and Children's Health, Section for International Maternal and Child Health, Uppsala University, Uppsala, Sweden

The paper in this issue entitled "Factors associated with the duration of breastfeeding" by Vogel et al. (pp. 1320–6) should be of interest to a wide range of readers, even if they have no contact with the country from which it comes, New Zealand. Compared to most health facility-based samples, this one appears to have been relatively unbiased and rates of follow-up were good.

Initiation of breastfeeding in this study population is at similar high levels as in Scandinavia, but the proportion continuing to breastfeed drops off faster with age. An interesting phenomenon mentioned by the authors is that many mothers breastfeed longer than they intended. This is also true in Sweden, probably more so than a decade ago when sustained breastfeeding was more frowned upon than appears to be the case today. While many factors may have led to this apparent change in attitude in Sweden, probably one important one was a series of articles in the major Stockholm newspaper several years ago asking whether it was right that women who did not want to stop breastfeeding at a particular time were forced to continue in secret. Without putting pressure on mothers to breastfeed longer, it may be possible to create a more permissive atmosphere in society towards those who want to do so.

The authors point out that it is of great interest to focus not on the demographic relationships commonly found to be "determinants" of breastfeeding duration, but on factors that can be changed. One major finding is that so many more mothers initiated formula feeding in the first month than intended to do so. This in turn was associated with shorter breastfeeding. Thus further research into which modifiable factors are associated with unintended formula use in the first month might be useful.

Plans for pacifier use were not asked about in advance. Thus, even though pacifier use was associated with earlier cessation of breastfeeding, we cannot tell whether it was something that unintentionally interfered with breastfeeding, if the pacifier was the mother's way of reducing the intensity of breastfeeding, or whether it was used as part of a planned "sevrage". In any case, the fact that early supplementation and pacifier use can have unintended effects might be discussed with both parents prenatally, something probably neglected in most places today.

Employment did not reach significance in its effect, but this could be because not many women were

employed (similar to the authors' speculation as to why smoking had no effect). The trend in New Zealand, as elsewhere, would appear to be for more mothers to enter the labour force. New Zealand is one of the very few industrialized countries which do not mandate by law any period of paid maternity leave. Thus it seems likely that working women there are often forced to make a sacrifice: either staying home to breastfeed despite a reduced income, or returning to work before they have breastfed as long or as exclusively as they would have liked to do.

The USA, until recently, had no mandated period of maternity leave at all, and, like New Zealand, still has no legislated paid leave. Breastfeeding women there who return to work within one year breastfeed for a shorter duration. Among those who work, the longer the leave they receive from their employer, the longer they breastfeed (1). The fact that paid leave is the norm in most of the world may explain the fact that the initiation and duration of breastfeeding do not seem to be much affected by mother's employment (2). Exclusivity is no doubt more likely to be affected, however, unless maternity leaves are over 6 mo in duration, as is commonly the case only in some western European countries. (Formally, the majority of these leaves are often "parental leaves", and only the first 12 wk or so are "maternity leaves".)

Some 25–30 y ago, breastfeeding rates were low in both Scandinavia and the USA. Since then, although maternal employment rates are lower in the USA, breastfeeding rates have improved much more in Scandinavia. Rea et al. (3) propose that maternity entitlements (paid leave and/or paid time and hygienic facilities for breastfeeding or expressing milk at the workplace), though not sufficient, are necessary to achieve high rates of exclusive breastfeeding. If this is so, providing paid leave in New Zealand might have a major impact in coming years, allowing women better to combine work and breastfeeding.

The International Labour Organization is currently revising its Maternity Protection Convention No. 103 from 1952. In early 1999, the ILO Secretariat suggested that the new convention should no longer include a provision offering breastfeeding workers paid time each day to breastfeed or express milk and should maintain the duration of paid leave at 12 wk. This represents no increase since the first convention was passed in 1919,

despite the fact that over 100 countries already have laws providing for more than 12 wk paid leave. At the ILO Conference in June 1999, the delegations from New Zealand, Australia, the USA and Switzerland were major supporters of these ILO suggestions, in line with their policies for trade liberalization and keeping down labour costs.

The Scandinavian countries were also opposed to breastfeeding breaks and wanted to minimize maternity leaves on the grounds that such entitlements are not consistent with gender equality in the workplace. This was perceived as rather selfish by women from other countries who do not enjoy such long paid leaves as Scandinavian legislation has provided for years. An exasperated Guatemalan delegate asked if the Scandinavians were suggesting that she and her husband take turns bearing children!

Regarding the new draft Convention, in the end, the delegates voted breastfeeding breaks back in, but maintained paid maternity leave at 12 wk. However, they increased the duration from 14 to 16 wk in the draft Recommendation. Governments will now comment on this new proposal and then meet again in June 2000 to hammer out and vote on a new Convention and

Recommendation. It will no doubt provide a norm that governments look toward for decades to come. Details on this and other aspects of the ongoing international struggle for the breastfeeding rights of working women are provided in a new World Alliance for Breastfeeding Action website (<http://www.waba.org.br/ilopage.htm>) funded by the Swedish International Development Cooperation Agency, Sida.

References

1. Visness CM, Kennedy KI. Maternal employment and breastfeeding: findings from the 1988 National Maternal and Infant Health Survey. *Am J Public Health* 1997; 87: 945–50
2. Van Esterik P, Greiner T. Breast-feeding and women's work: constraints and opportunities. *Studies Family Planning* 1981; 12: 184–97
3. Rea MF, Venâncio SI, Batista LE, Greiner T. Factors which facilitate and constrain breastfeeding among women working in factories in São Paulo, Brazil. *J Hum Lactation* 1999; 15: 233–9

Received Aug. 23, 1999; accepted Aug. 31, 1999

T Greiner, International Maternal and Child Health, Uppsala University Hospital, S-751 85 Uppsala, Sweden (Tel. +46 18 663000, fax. +46 18 508013, e-mail. ted.greiner@ich.uu.se)

The rationale for iron-fortified follow-on formulas and growing-up milks

F Haschke

Department of Pediatrics, University of Vienna, Austria

Iron deficiency anemia is considered to be a common nutritional deficiency disease in infants and small children in both developing and developed countries (1–3). Anemia is the most commonly diagnosed end-point of iron deficiency, but nonheme effects additionally contribute to many of the clinical manifestations. The combination of hematologic and non-hematologic iron-deficiency is responsible for clinical symptoms such as weakness, muscle fatigue and abnormal gastrointestinal motility (4). Of most concern is the permanent developmental disadvantage which has been reported in observational studies (5,6), and there is no clear evidence that iron supplementation improves the developmental status of young anemic children (7).

Thirty years ago, the American Academy of Pediatrics' Committee on Nutrition indicated (8) that the use of iron-fortified formula after weaning results in adequate iron stores which help prevent later development of iron deficiency. However, it is not clear up to what age those formulas should be provided. In this

issue, Bramhagen and Axelsson (9) have reported that the rate of iron deficiency anemia in 2.5-y-old children in southern Sweden was still as high as 7%. Feeding iron-fortified follow-on formulas (10) at that age was an important preventive measure (9). Forty-three percent of the children with normal iron nutritional status received iron-fortified follow-on formula, but only 11% of the children with iron deficiency. Immigrant children had a higher risk of iron deficiency anemia than Swedish children (11% vs 5%) and a lower percentage of those children received iron-fortified formulas (24% vs 48%).

The requirement for iron during the second and third years of life consists of the desirable increment in total body iron plus the amount of iron needed to replace inevitable losses (4). If increment and losses during the second and third years are considered, the estimated daily requirement for absorbed iron is approximately 0.5 mg. It is somehow lower than from birth to 1 y, where the estimated daily requirement for absorbed iron