

WABA Research Task Force (RTF) e-newsletter

September 2012 issue

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From the Editors

This issue

We are pleased to share with you the fifth issue of the WABA Research Task Force (RTF) E-newsletter. This issue deals with a variety of topics ranging from how to provide support for breastfeeding mothers and fathers in their efforts to be transition to fatherhood, to the effects of breastfeeding on maternal body composition to more technical issues on the composition of breastmilk and coeliac disease.

About the newsletter

There is an abundance of research and much of this can be accessed through journals and databases such as Medline. This newsletter aims to present some of this emerging research in a comprehensive and easy-to-read format.

For each issue, we will choose a few current topics where we ask key researchers/programme experts to summarise the latest research and explain how these findings can be applied in the real world. You will also find abstracts and commentaries on a few research studies and the links to the full text articles for further reading.

We hope that this newsletter will enhance your work, whether programme, clinical or advocacy, as well as stimulate discussion about research findings, methodologies and ethics.

Your comments on the current topics and articles are most welcome! If you have any suggestions for future topics, please let us know. The newsletter will be issued three times a year.

Enjoy reading!

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Support is effective in increasing breastfeeding duration

The World Health Organization recommends that infants should be exclusively breastfed until six months of age with breastfeeding continuing as an important part of the infant's diet till at least two years of age. This is because there is extensive evidence on the short-term and long-term health risks of not breastfeeding for both infants and their mothers. Many mothers stop breastfeeding before they want to as a result of problems, many of which are preventable with good care and support. This premature discontinuation may cause disappointment and distress for the mothers and health problems for both themselves and their infants. Support for breastfeeding can include giving reassurance, praise, information, and the opportunity to discuss and to respond to a mother's questions. This review looked at whether providing extra support for breastfeeding mothers, from professionals or from trained lay people or both, would help mothers to continue to breastfeed when compared with providing standard maternity care. The review found 52 randomised controlled studies from 21 countries that included more than 56,000 women. All forms of extra support, analysed together, showed an increase in the length of time women continued to breastfeed and the length of time women breastfed without introducing any other types of liquids or foods. Support by both lay supporters and professionals had a positive impact on breastfeeding outcomes. Face-to-face support was associated with a larger effect than telephone support. Support that is only offered if women seek help is unlikely to be effective. This indicates that women should be offered predictable, scheduled, ongoing visits. Interventions providing extra support had a more pronounced effect when background rates of breastfeeding initiation were high. Women's views about support interventions were not well reported in these studies. Support should be tailored to the setting and the needs of the population group. Further research is needed to identify the aspects of support that are the most effective.

Renfrew MJ, McCormick FM, Wade A et al (2012). Support for healthy breastfeeding mothers with healthy term babies (Review). The Cochrane Collaboration. Published by John Wiley & Sons, Ltd.

Comments from the editor: *This review of support intervention includes a larger body of evidence than previous reviews in this field. There was a large variation in the types of interventions and settings described in the trials that were assessed. These could range from one single session at a hospital to group sessions to telephone support to multiple one-to-one home visits. Interestingly, it indicates that both peer and professional support are effective in increasing breastfeeding duration, in particular the duration of exclusive breastfeeding. It would appear that support interventions are most effective in increasing breastfeeding duration in communities where the initiation rates are higher than 80%. This finding would indicate that promoting breastfeeding initiation at the population level is also important in addition to providing support to individual mothers. Increasing awareness amongst the public through activities related to World Breastfeeding Week is thus a complementary strategy to directly supporting mothers.*

Breastfeeding and coeliac disease

A systematic review and meta-analysis that compared the effect of breastfeeding on risk of coeliac disease (CD) was carried out as an update to a previous review. A systematic review of observational studies published between 1966 and May 2004 on the subject was previously reported. This update reviews observational studies published between June 2004 and April 2011.

Four observational studies met the criteria and were included. Two of three studies which had examined the duration of breastfeeding and CD reported significant associations between longer duration of breastfeeding and later onset of CD. Breastfeeding during the introduction of gluten to the infant was reported to have a protective effect in two studies.

The authors conclude that their findings support the previously published work that breastfeeding seems to offer a protection against the development of CD in predisposed infants. Breastfeeding at time of gluten introduction is the most significant variable in reducing the risk. Timing of gluten introduction may also be a factor in the development of CD.

Henriksson C, Bostrom A, Wiklund IE (2012). What effect does breastfeeding have on coeliac disease? A systematic review update. Evid. Based Med. published 4 August 2012, 10.1136/eb-2012-100607

Comments from the editor: *This study highlights one of the controversies surrounding the timing of introducing complementary foods in developed country settings. As it is clear that breastfeeding during the introduction of gluten (which is present in most cereals) is protective against coeliac disease, the question is whether to encourage mothers to continue breastfeeding beyond 6 months or start introducing gluten depending on the rates of breastfeeding in the specific country. A proactive or a pragmatic approach?*

Variation of nutrients in breastmilk

Previous research suggests the existence of a self-regulatory mechanism that determines milk intake from feed to feed in breastfed infants, allowing them to feed according to appetite. It has been noted that milk intake is not restricted by maternal milk supply and is determined according to infant demand. Data regarding the association between breastmilk composition and infant feeding patterns (frequency and amount of breastmilk taken) would help in understanding the regulation of food intake in breastfed infants.

A study was undertaken in Australia to examine the relationship between breastmilk macronutrient concentration and patterns of milk intake in breastfeeding infants over a 24-hour breastfeeding period. Pre and post breastfeed samples, from each breast, over a 24-hour period were collected by mothers of exclusively breastfed babies. Breastmilk samples were

Breastfeeding and maternal body mass index

analysed for fat, lactose, total protein, casein, and whey protein content and the energy content for each feed was calculated.

The researchers noted that breastfeeding patterns and milk composition varied greatly between individuals. The fat content of milk significantly differed over 24 hours whereas the concentration of lactose and protein content remained the same. A significant negative relationship was found between the 24-hour total protein intake and frequency of breastfeeds ($P = .01$). Thus, a higher 24-hour protein intake was significantly associated with fewer feeds per day. Lactose concentration changed little throughout the day and the average lactose concentration was not associated with the intervals between feeds. No relationship was seen either between fat or energy content and feeding patterns.

Whilst the authors acknowledge that data was taken at one time point in a mother's breastfeeding experience, they suggest that the association between milk protein intake and the breastfeeding frequency suggests that protein intake may play a role in infant appetite control.

Khan S, Hepworth AR, Prime DK et al (2012). Variation in Fat, Lactose, and Protein Composition in Breast Milk over 24 Hours: Associations with Infant Feeding Patterns. J Hum Lact. published 13 July 2012, 10.1177/0890334412448841

Comments from the editor: *It is a well-known fact that the fat content varies substantially between mothers and over the diurnal period. However, this study points to the variation in protein content as a major determinant of infant feeding satiety cues and thus feeding frequency. Basically higher protein intake leads to a lower feeding frequency. It is always useful to understand more about biological regulation of breastmilk intake, especially as regards the prevention of obesity later in life.*

A large population-based study of women in the UK was carried out to explore the long-term effects of women's childbearing patterns on their body mass index (BMI). Data was captured from responses from 740,628 postmenopausal participants in the Million Women Study, recruited during the years 1996-2001.

The women reported their height, weight, reproductive histories, infant feeding history and other relevant factors. Women were aged 57.5 years on average, and had a mean BMI of 26.2; 88% were parous, with 2.1 children on average. The standardised mean BMI increased progressively with the number of births, from 25.6 in nulliparous women up to 27.2 for women with four or more births. Among the parous women, 70% had ever breastfed and their average total duration of breastfeeding was 7.7 months. At every parity level the standardised mean BMI was significantly lower among women who had breastfed than those who had not, decreasing by 0.22 for every 6 months of breastfeeding. In other words, women's mean BMI was 1% lower for every 6 months that they had breastfed.

Mothers' experience of fathers' support for breast-feeding

These associations were highly statistically significant and independent of the effects of other known factors that are associated with adiposity – socioeconomic group, region of residence, smoking and physical activity.

The authors conclude that patterns of childbearing have a persistent effect on adiposity in this population. The reduction in BMI associated with just 6 months breastfeeding in UK women could importantly reduce their risk of obesity-related disease and their costs as they age.

Bobrow KL, Quigley MA, Green J et al (2012). Persistent effects of women's parity and breastfeeding patterns on their body mass index: results from the Million Women Study. International Journal of Obesity advance online publication, 10 July 2012; doi:10.1038/ijo.2012.76

Comments from the editor: *Yet another study indicating benefits of breastfeeding beyond 6 months for the mother and her subsequent nutrition and health status.*

The objective of this qualitative study was to examine mothers' experience of support received from fathers for breast-feeding. In-depth in-person interviews with 19 women from a metropolitan area in the north-eastern USA with recent breast-feeding experience were conducted. Interview transcripts were analysed by qualitative content analysis. Interviews were designed to explore the mothers' perception of role of fathers in breast-feeding, education on breast-feeding that fathers received and their perception of the fathers' view on breast-feeding. Ten themes emerged, these involved practical and emotional support provided by fathers, especially during times of unexpected breast-feeding challenges. In addition, mothers perceived fathers may benefit from more peer and professional support, lactation consultant service and breast-feeding education.

Mothers appreciated the support from fathers for breast-feeding continuation, including encouragement and understanding. These results may be useful for health-care practitioners to promote breast-feeding continuation by supporting fathers in their role in the breast-feeding process.

Nickerson LE, Sykes AC, Fung TT. Mothers' experience of fathers' support for breast-feeding. Public Health Nutr. 2012 Jan 27:1-8.

Comments from the editor: *This kind of qualitative in-depth research can help reveal information that would not be generated in a questionnaire survey. The authors describe the different types of support that fathers can provide in various more or less challenging situations. The study highlights the need to involve fathers to be in antenatal preparation so that they will be able to support their partner from the start.*

Transition to fatherhood: modeling the experience of fathers of breastfed infants

Transition to parenthood has long been examined from the angle of mothers' experience. When looked at this transition through fathers' lens, fathers' involvement and perceived parental efficacy appear to be landmarks of this experience. This article examines a model of the relationships among father involvement, perceived parental efficacy, events related to breastfeeding, support, stress, and income with a sample of 164 fathers of breastfed infants. This model highlights the direct and indirect contributions of support and stress to fathers' perceived parenting efficacy and involvement. Possible directions for nursing practice, education, and research are proposed to ease men's transition to fatherhood.

de Montigny F, Lacharité C, Devault A. Transition to fatherhood: modeling the experience of fathers of breastfed infants. ANS Adv Nurs Sci. 2012 Jul;35(3):E11-22.

Comments from the editor: *This unique study highlights that many factors apart from breastfeeding events influence fathers parenting efficacy and involvement. The level of perceived support that fathers experienced was a strong factor that determined their self-esteem and thus involvement with their child. For healthcare workers, it is important to involve fathers in decision-making and take into consideration that developing abilities takes time and a participatory approach is best.*

What do fathers think about breastfeeding?

The objective of this qualitative study was to explore male partner's perceptions of breastfeeding to inform the development of interventions to increase their support of breastfeeding. Participants were recruited and interviewed in two Special Supplemental Nutrition Program for Women, Infants and Children (WIC) clinics located Honolulu, Hawai'i. Fourteen male partners of low-income pregnant women or new mothers participated in the study. Male partner attitudes, knowledge, and feelings were collected through private interviews. Interviews were transcribed verbatim and data were analyzed using grounded theory methods. All men appreciated breastfeeding's health benefits, acknowledged that it was natural, and were empathetic to the efforts of their partners. The men also discussed not being involved in the breastfeeding decision, believing formula feeding was more convenient than breastfeeding, feeling left out of the infant-feeding process, and being uncomfortable with breastfeeding in public. Findings suggest that an intervention to increase male partner support of breastfeeding should include multiple components to enhance knowledge, to empower men to be more engaged in the breastfeeding decision, to provide specific tips on how men can be involved in breastfeeding, and to increase comfort with breastfeeding in public. A multicomponent framework such as the social cognitive theory could be useful in guiding the development of such an intervention.

Male influence on infant feeding in rural Guatemala

Mitchell-Box K, Braun KL. Fathers' Thoughts on Breastfeeding and Implications for a Theory-Based Intervention. J Obstet Gynecol Neonatal Nurs. 2012 Aug 3. doi: 10.1111/j.1552-6909.2012.01399.x.

Comments from the editor: There is a growing amount of evidence that fathers' knowledge, attitudes and feelings have an effect on breastfeeding decisions. This study goes so far as to suggest that interventions to increase breastfeeding practices should aim to expand the breastfeeding dyad to a triad which includes the male partner? How would this work in your setting?

Guatemala has one of the highest rates of child stunting in the world, which especially impacts rural indigenous agricultural communities. Despite decades of intensive nutrition research and interventions, only rarely have nutrition programs successfully lowered the rate of stunting in these settings. The bulk of nutritional interventions in Guatemala are targeted at the education of female caregivers. However, women's ability to implement best practices in infant breastfeeding and complementary feeding are often constrained by external factors. This study evaluated the knowledge, beliefs, and practices of female caregivers, as well as the attitudes of fathers, toward breastfeeding and infant feeding in a rural Guatemalan village.

Clinical work, participant-observation, surveys, interviews, and focus groups were conducted in a rural Guatemalan village in conjunction with a child feeding program from August 2008 to January 2011.

Male employment status, mental health, and attitudes towards child rearing and parenting responsibilities are often principal factors in infant growth failure.

Successful child feeding programs must include educational elements for men and should consider structural elements that provide a safety net for unexpected changes in domestic finances.

Chary AN, Messmer SE, Rohloff PJ. Male influence on infant feeding in rural Guatemala and implications for child nutrition interventions. Breastfeed Med. 2011 Aug;6(4):227-31. Epub 2011 Jun 1.

Comments from the editor: *In poor settings, where child malnutrition is chronic, it is vital to investigate the factors that would improve the situation. Now it would appear that interventions should target both parents as well as the underlying socio-economic conditions under which families live. Only this will make a sustainable change.*

In 2005, Scotland became the first nation to make breastfeeding in public a legal right, but current breastfeeding targets and maternity leave allowance do not acknowledge the conflicting demands women face when juggling employment and motherhood. This paper explores how employment and maternity leave relate to breastfeeding duration among mothers in Scotland.

The Growing Up in Scotland national longitudinal cohort study of 5,217 babies born in 2004-2005 was used. Multivariate proportional hazards regression models were specified using one cross-sectional wave of data to predict breastfeeding duration. Mothers working as employees, full-time or part-time had a higher risk of earlier breastfeeding cessation than non-working mothers. However, self-employed mothers did not differ significantly from non-working mothers in their breastfeeding patterns. Mothers who took longer maternity leave breastfed for longer.

The relationships between employment, maternity leave and breastfeeding duration were significant when controlling for known predictors of breastfeeding. Younger mothers, those with less formal education, single mothers, those of white ethnic background, and first-time mothers were more likely to stop breastfeeding sooner, as has been noted in previous research. Employment and early return to work are both factors associated with a shorter duration of breastfeeding. More flexible working conditions and more generous employment leave could help to prolong breastfeeding among working mothers.

Current health and employment policy in Scotland and the UK could be better coordinated so that working mothers have the adequate support to meet the conflicting demands of employment and motherhood.

Skafida V. *Matern Child Health J.* 2012 Feb;16(2):519-27. Juggling work and motherhood: the impact of employment and maternity leave on breastfeeding duration: a survival analysis on Growing Up in Scotland data.

Comments from the editor: *This study confirms previous studies in showing the negative association between employment and breastfeeding duration. It also shows a positive association between maternity leave duration and breastfeeding. However, as the authors point out, the associations may not be causal but rather reflective of other factors such as socio-economic status, educational background and job-related working conditions. Another interesting finding is that self-employed mothers did not differ significantly from non-employed mothers as regards duration of breastfeeding. This could be explained by self-employed mothers being more likely to work from home, being, which would facilitate combining the two. Since breastfeeding requires proximity between mother and child, it is important to explore how this can be facilitated for mothers employed in traditionally less flexible work settings.*

Breastfeeding Practices: Does Method of Delivery Matter?

The objective of this US-based study was to assess the relationship between method of delivery and breastfeeding. Using data (2005-2006) from the longitudinal Infant Feeding Practices Study II with a cohort of more than 3000 women the authors assessed the relationship between delivery method (spontaneous vaginal, induced vaginal, emergency cesarean, and planned cesarean) and breastfeeding: initiation, any breastfeeding at 4 weeks, any breastfeeding at 6 months, and overall duration. Multivariable analyses were used to adjust for several confounders, including selected demographic characteristics, participants' pre-delivery breastfeeding intentions and attitude, and used event-history analysis to estimate breastfeeding duration by delivery method. No significant association between delivery method and breastfeeding initiation was found. In the fully adjusted models examining breastfeeding duration to 4 weeks with spontaneous vaginal delivery group as the reference, those with induced vaginal deliveries were significantly less likely to breastfeed and no significant relationship was observed for those who had planned or emergency cesarean deliveries. Again, compared with spontaneous vaginal delivery group, those with induced vaginal and emergency cesarean deliveries were significantly less likely to breastfeed at 6 months. Median breastfeeding duration was 45.2 weeks among women with spontaneous vaginal, 38.7 weeks among planned cesarean, 25.8 weeks among induced vaginal and 21.5 weeks among emergency cesarean deliveries. While no significant association was observed between delivery method and breastfeeding initiation; breastfeeding duration varied substantially with method of delivery, perhaps indicating a need for additional support for women with assisted deliveries.

Ahluwalia IB, Li R, Morrow B. *Matern Child Health J.* 2012 Aug 28. Breastfeeding Practices: Does Method of Delivery Matter?

Comments from the editor: *This study indicates that method of delivery is an important factor in breastfeeding success. One strength of the longitudinal approach used in this study is that they were able to assess and compare pre-delivery breastfeeding intentions and attitudes to actual breastfeeding duration later on. Although the generalizability of the study results may be somewhat limited to slightly higher socio-economic groups who generally respond better to consumer surveys, it points to the need to provide additional assistance to support women who have difficult deliveries. This support should be provided in the immediate post-partum period and once they leave the hospital.*



The World Alliance for Breastfeeding Action (WABA) is a global network of individuals and organisations concerned with the protection, promotion and support of breastfeeding worldwide based on the Innocenti Declaration, the Ten Links for Nurturing the Future and the WHO/UNICEF Global Strategy for Infant and Young Child Feeding. Its core partners are International Baby Food Action Network (IBFAN), La Leche League International (LLL), International Lactation Consultant Association (ILCA), Wellstart International, and the Academy of Breastfeeding Medicine (ABM). WABA is in consultative status with UNICEF and an NGO in Special Consultative Status with the Economic and Social Council of the United Nations (ECOSOC).

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