

Exclusive-breastfeeding promotion by peer counselors in sub-Saharan Africa

(PROMISE-EBF): a cluster-randomised trial. Tylleskär T, Jackson D, Meda N, Engerbretsen IMS, Chopra M, Diallo AH, *et al*/for the PROMISE-EBF Study Group. *Lancet* 378: 420-427, 2011.

Introduction

Systematic reviews have found that exclusive breastfeeding (EBF) is associated with a reduced incidence of diarrhea and respiratory infection (Kramer, 2009) and lower infant mortality (Bahl, 2005). It has been estimated that successful breast feeding interventions could reduce infant mortality by 13% (Jones, 2003). In response to these observations, public health programs have been implemented worldwide to promote and support EBF during the first six months of infancy. The major behavior-change/communication strategies that have been used to promote EBF are facility-based professional guidance of child care givers and community-based peer counseling (Bhandari, 2008). Previous studies, including one in Africa, found that facility-based interventions could have a considerable impact on the prevalence of EBF; but no results have been published previously from community-based trials of peer counseling in Africa. The article selected for presentation in this month's edition of NNA evaluated the impact of community-based peer counseling programs on the prevalence of both EBF and infant diarrhea in three sub-Saharan countries.

Methods

The study was designed as a multi-center, cluster-randomized, behavior change trial, which was carried out by locally recruited peer counselors in three countries of sub-Saharan Africa (Burkina Faso, South Africa, and Uganda) from mid-2006 to mid-2008. The study participants were recruited during pregnancy and screened for eligibility at three weeks post-partum. Eligibility criteria were that the infant was a singleton birth and had no severe malformations that could interfere with breastfeeding. Mothers with severe psychological illness or planning to use replacement feeds were excluded. The counselors were trained using WHO training materials, and they were continuously supervised once or twice monthly during the course of the project. The counselors met with mothers once prenatally and during home visits scheduled on least four occasions from 1-20 weeks post-partum to discuss optimal breast feeding practices. When the infants reached 12 and 24 weeks of age, information was collected by a separate cadre of field workers on the infants' current breastfeeding practices and all foods and liquids that they consumed during the 24 hours and seven days prior to the interviews. Infants were classified as being exclusively breast fed if they did not receive any food or liquids other than breast milk. The data collectors also asked the caregiver if the infant had had diarrhea during the two weeks prior to the home visit.

Results and Conclusions

Information was presented for a total of 2579 mother-infant pairs from the three countries. The characteristics of the mothers and their households did not differ for the intervention and control communities in the respective countries. Following the onset of the intervention, the prevalence of EBF at 12 weeks (based on 24-hour recall) was 79-82% in the intervention communities in Burkina Faso and

Uganda compared with 35-44% in the control communities. At 24 weeks, the prevalence of EBF in these two countries ranged from 59-73% in the intervention communities versus 15-22% in the control areas. Overall, the prevalence of EBF was much lower in South Africa, but a similar relative impact of peer counseling was observed. At 12 and 24 weeks, the prevalence of EBF in South Africa was 10% and 2%, respectively, in the intervention communities, compared with 6% and <1% in the control areas at the same respective infant ages. There were no significant differences in the reported prevalence of diarrhea during the previous two weeks at either age in any of the sites.

Program and Policy Implications

These results indicate that community-based infant feeding counseling delivered by well trained and continuously supervised peer counselors can increase the prevalence of EBF two- to three-fold compared with non-intervention communities in Africa. These results are consistent with reports from other regions of the world. An increased prevalence of EBF would be expected to result in fewer common infections, as has been reported from other regions; but, surprisingly, the investigators did not observe any impact of the intervention on the prevalence of diarrhea in the present study. The researchers speculated that this may have been due to the fact that most infants were already being predominantly breastfed, so the change from predominant breastfeeding to EBF may not have had much of an impact on risk of diarrhea. However, other studies have found that just the addition of water to otherwise exclusive breastfeeding can increase the prevalence of diarrhea two-fold (Brown, 1989; Popkin, 1990), so another explanation for these results seems more likely. One possibility is that the methods used to ascertain the occurrence of diarrhea may have been inadequate. For example, the use of a two-week recall period and the reliance on caregiver recognition of diarrhea may have reduced the sensitivity of the comparison. Other studies in West Africa have found that mothers recognize only about half the episodes of diarrhea diagnosed independently according to clinical criteria of increased stool frequency and liquid consistency (Cogswell, 1991). Thus, it is conceivable that the mothers did not recognize or recall episodes of illness that had occurred.

NNA Editors' Comments*

The results of this study, coupled with the outcomes of earlier trials, indicate that it is possible to motivate child caregivers to change to more favorable infant feeding practices, using either facility-based or community-based behavior change/communication interventions. In rural Africa, where utilization of health facilities is limited, the success of community-based peer counseling is a welcome observation. Even though the current study did not confirm a beneficial effect of EBF promotion on diarrhea prevalence, this may have been due to methodological factors. In any case, the sizeable impact of peer counseling on EBF prevalence is remarkable. This platform may also be useful for delivering counseling on other nutrition- and health-related issues. It would be helpful to know the cost of this approach to assess whether it is the most cost-effective and sustainable strategy for reaching child caregivers in Africa.

References

- Bahl R, Frost C, Kirkwood BR, et al. Infant feeding patterns and risk of death and hospitalization in the first half of infancy: multicentre cohort study. *Bull World Health Organ* 83: 418-426, 2005.
- Bhandari N, Kabir AK, Salam MA. Mainstreaming nutrition into maternal and child health programmes: scaling up of exclusive breastfeeding. *Matern Child Nutr* 6:53-66, 2010.

Brown KH, Black RE, López de Romaña G, Kanashiro HC. Infant-feeding practices and their relationship with diarrheal and other diseases in Huascar (Lima), Peru. *Pediatrics* 83:31-40, 1989.

Cogswell ME, Oni GA, Stallings RY, Brown KH. Socio-demographic and clinical factors affecting recognition of childhood diarrhea by mothers in Kwara State, Nigeria. *Soc Sci Med* 33:1209-1216, 1991.

Jones G, Steketee RW, Black RE, Bhutta ZA, Morris SS, Bellagio Child Survival Study Group. How many child deaths can we prevent this year? *Lancet* 362, 65–71, 2003.

Kramer MS, Kakuma R. Optimal duration of exclusive breastfeeding (Review). *The Cochrane Library*, 2009.

Popkin BM, Adair L, Akin JS, Black R, Briscoe J, Flieger W. Breast-feeding and diarrheal morbidity. *Pediatrics* 86:874-882, 1990.

*These comments have been added by the editorial team and are not part of the cited publication.

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