

Flax VL, Negerie M, Ibrahim AU, Leatherman S, Daza EJ, Bentley ME. **Integrating group counseling, cell phone messaging, and participant-generated songs and dramas into a microcredit program increases Nigerian women's adherence to international breastfeeding recommendations.** J Nutr 2014; 144:1120-4.

Introduction

The beneficial effects of breastfeeding on both short-term and long-term health are well established (1, 2) and international organizations recommend: 1. early initiation of breastfeeding within one hour of birth, 2. exclusive breastfeeding for the first 6 months of life, and 3. the introduction of nutritionally-adequate and safe complementary foods at 6 months together with continued breastfeeding up to two years of age or beyond (3). However, worldwide many infants do not receive optimal breastfeeding. For example in Nigeria, only 13% of children were reportedly exclusively breastfed from birth to 6 month of age (4).

This issue of NNA summarizes the findings of an effectiveness trial aiming to increase early breastfeeding initiation and exclusive breastfeeding among female microcredit clients in northern Nigeria. The article was published recently in the *Journal of Nutrition* (5).

Methods

The study was implemented in Bauchi State, Nigeria as a cluster-randomized controlled trial. Women participating in monthly microcredit group meetings were randomly assigned to intervention or control arm at the level of the microcredit group. The microcredit program was set up as follows: community members were recruited into groups of 5-7 people who guaranteed each other's loans. Once per month several small groups met in a larger group (20-30 people) with their credit officer for loan repayments and training in business skills. An initial loan was an equivalent to 30-60 USD.

The breastfeeding intervention linked with the microcredit program consisted of three components, which were provided to all women in the intervention group (whether or not they were pregnant or lactating). Credit officers were trained to lead breastfeeding learning sessions during monthly microcredit meetings for 10 months. A total of seven different learning sessions were available. Text and voice messages were sent out weekly to a cell phone provided to small groups of microcredit clients. Each small group prepared songs and dramas, which were presented during monthly microcredit meetings. More details on key messages and program implementation are described by Flax et al. (5).

To assess the impact of the breastfeeding intervention baseline and final survey, interviews were conducted by an independent team of trained data collectors unaware of the study group. Within the randomly assigned monthly microcredit meeting groups, women were eligible to participate in the baseline survey if they were aged 15-45 years and pregnant at the time of the interview.

Results and Conclusions

In 172 monthly meeting groups 2158 microcredit clients were documented and of those 461 were eligible to participate in the baseline survey. Forty monthly meeting groups were randomly assigned to the intervention arm (n=229 pregnant women) and 37 monthly meeting groups to the control arm (n=232 pregnant women). Pregnant women participating in the survey had a mean age of 25±6 yrs.

The exposure to the intervention was good. The microcredit meetings were held with similar frequency in both the intervention and control arm and all available learning sessions on breastfeeding were held at least once in the intervention arm. Over two thirds of the participants attended at least seven learning sessions. The cell phone messages (text and voice) were received by almost all (96%) of the phones handed out by the project. These messages were used to create an average of 17 ± 5 songs or dramas by the small groups.

At baseline, 53% intended to initiate breastfeeding within 1 hour of delivery, 58% intended to breastfeed colostrum and 41% intended to breastfeed exclusively for the first 6 months. Participants who reported these intentions had increased odds of reporting these same practices at follow up. During the follow up interviews, the odds of exclusive breastfeeding were increased in the intervention arm compared to the control (p<0.01). The percent women who reported exclusive breastfeeding from 1 to 3 months was 71% in the intervention arm compared with 58% in the control arm (odds ratio (OR) 1.8; 95% confidence interval (CI) 1.1, 3.0). The percent women who reportedly breastfed exclusively between 3 to 6 months declined in both arms, but less in the intervention arm. Sixty-four percent reported to breastfeed exclusively their 3-6 months old child compared to 43% in the control group (OR 2.4; 95% CI 1.4, 4.0). Not giving water in the first 6 months explained most of the increase in exclusive breastfeeding among women in the intervention arm (24% provided water in intervention arm vs 49% in control arm, p<0.001). Reported breastfeeding practices differed also during the first few hours and days of the infant's life. The odds of early initiation of breastfeeding (p<0.001) were increased in the intervention arm (70%) compared to the control arm (48%; p<0.001). Similarly more women in the intervention arm reported to have exclusively fed colostrum or breast milk in the first 3 days of life compared to the control arm (86% vs. 71%; p<0.01). In contrast, starting complementary feeding before the age of 6 months did not differ between groups.

Policy and Program Implications

The present study in northern Nigeria included three behavior change communication delivery strategies: breastfeeding learning sessions, cell phone messages, and songs/dramas by participants. While the impact of the individual strategies was not assessed, the programmatic implementation was feasible and the whole intervention package resulted in an increased likelihood that women reportedly adopted recommended breastfeeding practices. Globally over 150 million women are involved in microfinance. Thus, integrating breastfeeding promotion or other health services in microfinance programs has the potential to reach a large number of women of childbearing age, although the program's coverage and cost-effectiveness need to be assessed.

NNA Editors comments

This present study was a well-designed effectiveness trial. The large number of clusters randomized to intervention and control arm allowed the assessment of the intervention impact. While the proportion of pregnant women participating in microfinance programs at any given time may not be very high, this program has the potential of a ripple effect by which non-pregnant participating women may share their newly acquired knowledge with pregnant family members. However, this potential effect requires further investigation.

It has to be noted that the difficulty with assessing breastfeeding practices is that it relies on caregivers' reports only. Thus, it cannot be ruled out that some participants may have been inclined to report what they have learnt, rather than their actual practices. Nevertheless, the findings are promising. More similar studies are needed to assess the impact of behavior change interventions aiming to improve breastfeeding and complementary feeding practices.

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