Original Article

Establishing individual peer counselling for exclusive breastfeeding in Uganda: implications for scaling-up

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Abstract

Exclusive breastfeeding remains critical for child survival, potentially reducing childhood morbidity and mortality. In Uganda, 98% of children are ever breastfed, but exclusive breastfeeding levels remain low. Supporting mothers in breastfeeding exclusively can improve breastfeeding practices. This paper describes experiences of establishing individual peer counselling for exclusive breastfeeding in the Uganda site of the Promoting Infant Health and Nutrition in Sub-Saharan Africa: Safety and Efficacy of Exclusive Breastfeeding Promotion in the Era of HIV trial, and highlights some implications for scaling-up. Twelve women were identified by their communities, one from each of 12 clusters. They were trained for 6 days and followed up for 1 year while they counselled mothers. Their knowledge and attitudes towards exclusive breastfeeding were assessed before and immediately after training, and also 10 months into peer counselling. Observations, field notes and records of interactions with peer counsellors were used to record experiences from this intervention. The communities were receptive to peer counselling and women participated willingly. After training and 10 months' follow-up, their knowledge and attitude to exclusive breastfeeding improved. All were retained in the study, and mothers accepted them in their homes. They checked for mothers several times if they missed them on the first attempt. Husbands and grandmothers played key roles in infant feeding decisions. Involving the communities in selection helped to identify reliable breastfeeding peer counsellors who were acceptable to mothers and were retained in the study. Other key issues to consider for scaling-up such interventions include training and follow up of peer counsellors, which led to improved knowledge and attitudes towards exclusive breastfeeding (ClinicalTrials.gov no: NCT00397150).

Keywords: peer counselling, exclusive breastfeeding, breastfeeding support, scaling-up.

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Background

Exclusive breastfeeding is a critical child survival strategy, important in preventing and reducing childhood morbidity and mortality (Jones *et al.* 2003). The World Health Organization (WHO) recommends exclusive breastfeeding for the first 6 months of life, unless there are medical contraindications (WHO 2001). Exclusive breastfeeding is defined as feeding an infant with only breast milk without adding anything, even water, except for prescribed medicines or vitamins (WHO 2001). The advantages of breastfeeding have been highlighted in a number of publications of findings from low-income countries (Arifeen *et al.* 2001; Oddy 2001; Onayade *et al.* 2004).

The recommendation to breastfeed exclusively for 6 months also applies to HIV-infected mothers because replacement feeding is not always affordable, feasible, acceptable, sustainable and safe as prescribed by WHO, while mixed feeding has been associated with increased mother-to-child transmission of HIV (Coovadia 2000; Coutoudis *et al.* 2002; Iliff *et al.* 2005; Coovadia *et al.* 2007).

Some conventional infant feeding practices in the African setting have been shown to interfere with the success of exclusive breastfeeding. These include delayed initiation of breastfeeding, use of pre-lacteals and early introduction of complementary feeds (Davies-Adetugbo 1997; Semega-Janneh *et al.* 2001; Nwankwo & Brieger 2002; Ssenyonga *et al.* 2004).

In Uganda, most women initiate breastfeeding but many introduce other feeds early, leading to low levels of exclusive breastfeeding by the age of 6 months [Ssenyonga *et al.* 2004; Wamani *et al.* 2004; Uganda Bureau of Statistics (UBOS) & ORC Macro Inc. 2007]. The practice of giving pre-lacteal feeds has been reported as common in Uganda (Ssenyonga *et al.* 2004; Engebretsen *et al.* 2007), mainly because mothers have to wait for their milk to come in or start flowing, and there is a perceived need to appease the baby's hunger or to 'clean the baby's throat' (Engebretsen *et al.* 2007). Most reasons for giving pre-lacteal feeds and early complementary feeds result from misconceptions, widespread in the Mbale communities, about the infant's physiological needs (Engebretsen *et al.* 2007). Some women give their

infants complementary foods early because they think they do not have enough breast milk (Mukasa 1992; Engebretsen *et al.* 2007) or believe that breast milk alone is not sufficient for their babies' nutritional needs (Engebretsen *et al.* 2007).

A number of researchers have reported that supporting mothers in breastfeeding exclusively leads to improved breastfeeding rates (Kistin *et al.* 1994; Morrow *et al.* 1999; Haider *et al.* 2000; Ingram *et al.* 2005; Quinn *et al.* 2005). It has been reported that training women from communities as peer counselors for exclusive breastfeeding is a useful strategy for increasing the levels of exclusive breastfeeding (Davies-Adetugbo 1996; Morrow *et al.* 1999; Shaw & Kaczorowski 1999; Haider *et al.* 2000; Aidam *et al.* 2005). This strategy is reportedly feasible for helping women to breastfeed successfully in Uganda (Nankunda *et al.* 2006).

This paper describes the experience of establishing individual peer counselling including training and retaining peer counsellors for exclusive breastfeeding in the Uganda site of the Promoting Infant Health and Nutrition in Sub-Saharan Africa: Safety and Efficacy of Exclusive Breastfeeding Promotion in the Era of HIV (PROMISE-EBF) study. It is a multi-centre community-randomized trial in Burkina Faso, Uganda, Zambia and South Africa, and one of its major objectives is to assess the impact of peer counselling on child health in Africa (<http://www.clinicaltrials.gov> no: NCT00397150) and the main outcomes are being reported elsewhere.

Methods

Design and study site

This paper reports qualitative and descriptive information about the 12 peer counsellors operating in the Uganda site of the PROMISE-EBF study. The data were collected between September 2005 and October 2006.

The Uganda site for the PROMISE-EBF study is situated in Mbale district, Eastern Uganda, which has a population of about 720 000 and a population density of 535 per square kilometre (UBOS 2002). The study was carried out in two of the seven counties

of the district: the urban Mbale municipality, situated approximately 230 km from the Ugandan capital, Kampala, and the rural Bungokho County. Mbale municipality is the district centre and has approximately 10% of the district population (UBOS 2002). Bungokho surrounds Mbale municipality and the population consists mainly of subsistence farmers. The majority are Bagisu who use Lumasaba as their main language, while some minority tribes, Iteso, Baganda and Bagweri, speak different languages but are also able to understand Lumasaba.

The intervention of peer counselling for exclusive breastfeeding was set up in 12 clusters, nine rural and three urban, each with an estimated population of 1000 inhabitants, expected to provide 35 babies in a year given a birth rate of 3.5%. Each rural cluster consisted of one to three villages combined, depending on the village population size. One rural cluster comprised three villages because they were sparsely populated. Two of the three urban clusters comprised densely populated non-formal settlement areas of Mbale town with poor housing and overcrowding.

Identification of the peer counsellors

The study team invited the village local council chairpersons for a meeting in Mbale town, where they were informed about the study and its main objectives. Each of the leaders subsequently organized a meeting with women in their respective villages, making a total of 12 meetings. At these meetings, the study team explained to the women what the study was about and the need to identify one of their numbers to be trained as peer counsellor for breastfeeding.

During each village meeting, the women proposed two to three candidates who were then interviewed by the study team in order to identify the one most suitable for training. The selected woman was announced to the meeting who then accepted her as their representative to be trained as their peer counsellor. Twelve women were selected, one from each of the designated clusters, for the peer counselling for exclusive breastfeeding intervention in the PROMISE-EBF study.

To be selected, a woman had to be aged between 18 and 45 years, and to be resident in the area with no

plans of leaving the area within 2 years. She had to have a good reputation in the community. Further, she had to be literate and numerate in the local language, willing to participate in the study including a 1-week residential training and to undertake home visits in order to help women breastfeed their babies. Previous personal experience of breastfeeding was an additional inclusion criterion. Those who were unable to attend the training were excluded.

Training of peer counsellors

The 12 selected women were given 6 days of training using simplified materials based on the WHO Breastfeeding Counselling Course (WHO & UNICEF 1993). At the beginning of the training, the way in which each peer counsellor fed her youngest child was assessed.

The methods used in the training included lectures, small group discussions, plenary discussions, role plays and hands-on practice with mothers who had just delivered at Mbale Regional Referral Hospital. During the clinical practice sessions, the women were observed counselling the mothers and helping them with positioning and attachment of their babies at the breast. The gaps identified in their knowledge and skills were addressed by the study team in order to improve their skills. The languages used in training were English and the two local languages commonly used in the area, Lumasaba and Luganda.

In addition to counselling training, the procedures of the study were also taught, namely, how to complete the peer counsellor visit forms and to record information at each visit. This information included dates of peer counselling visits, the duration of a counselling session and a checklist of topics discussed with the mothers. During training, the proper timing of peer counsellor visits and the key messages to share with the mothers during different visits were emphasized (Box 1). All 12 peer counsellors completed the training and started supporting mothers in their villages with breastfeeding.

The training was carried out by a team of two paediatricians and one doctor led by the first author, who was a national trainer and course director for two Ministry of Health courses: the Breastfeeding Coun-

Box 1. Key messages given during the different visits by the peer counsellors**Antenatal visit**

- Skin-to-skin contact between baby and mother after birth
- Early initiation of breastfeeding within 1 h
- Colostrum is good for the baby
- Give no pre-lacteal feeds to baby
- Frequent breastfeeding increases breast milk production
- Baby should empty one breast before changing to another breast
- Breastfeed exclusively for 6 months

Subsequent visits (with varying emphasis)

- Good attachment and positioning
- Frequent breastfeeding increases breast milk production
- Baby should empty one breast before changing to another breast
- How to handle a crying baby
- Expressing and storing breast milk
- Normal stools and normal urination
- Breastfeed exclusively for 6 months
- Mother should eat properly and practice good hygiene.

selling Course for Health Workers and the HIV and Infant Feeding Counselling Course for Health Workers. All three had earlier been trained as trainers for peer counsellors for exclusive breastfeeding using the La Leche League training curriculum. The lead trainer also supervised the running of the breastfeeding clinic at Mulago National Referral and Teaching Hospital, Kampala. The supervisory team comprised of the lead trainer and a social worker, who had been working with communities on other activities. This social worker was trained with the peer counsellors and given further training and skills for supervising the peer counsellors, which she did on a full-time basis.

Characteristics of the peer counsellors

Twelve women completed training as peer counsellors for exclusive breastfeeding. Their age range was 25–40 (average 34 years). All had attained at least 7 years of formal education; one had obtained a diploma in secretarial studies after 11 years of formal education. Eleven were married and most were full-

Table 1. Characteristics of the 12 female peer counsellors including previous infant feeding practices of their youngest child

Practice	Yes	No
Has children	11	1
Timely initiation of breastfeeding	6	5
Fed baby with colostrum	9	2
Exclusively breastfed for 6 months	6	5
Breastfed baby for 2 years or more	4	7

time subsistence farmers and child carers. All had breastfed their babies except one who had not yet had a baby of her own. The majority had fed their babies on colostrum and more than half had fed their babies according to WHO guidelines (Table 1).

Assessment of impact of training on the peer counsellors

Before starting the training, the women were given a non-standardized pre-test. This included both open-ended and closed questions on their knowledge about exclusive breastfeeding, as well as questions assessing their attitudes to and beliefs about exclusive breastfeeding. The pre-test highlighted problem areas concerning knowledge about breastfeeding and these were given due emphasis during the training and follow-up. The same questions were repeated as a post-test immediately after training and again 10 months into the peer counselling process. This test is available as supporting material in Appendix S1. Please see the end of this paper for details of how to access it.

The demographic characteristics of each peer counsellor and her practices in feeding her youngest child were obtained. During the training, the women's participation in training activities was observed and their understanding of the course content was assessed.

Peer counselling intervention

The peer counsellors were advised to counsel and support all pregnant mothers identified within their villages in order to help each of them to benefit from the intervention. They were to visit each

mother at least five times, the first visit occurring when a mother was about 7 months pregnant. The remaining visits were made during the first, fourth, seventh and 10th weeks after delivery. The key messages emphasized during the different visits are shown in Box 1. However, mothers with breastfeeding problems were given extra visits, which were also recorded on the peer counsellor's visit form. Extra visits were also given if a mother called the peer counsellor for additional assistance outside the scheduled time or if the peer counsellor deemed it necessary. A visit was declared 'missed' if the peer counsellor failed to find the mother at home on three different occasions during the week scheduled for the visit. The peer counsellors chose the most convenient times to visit the mothers during the scheduled weeks.

Supervision of the intervention

The key follow-up activities were supervision visits to the peer counsellors by the supervisory team and monthly meetings between this team and all the peer counsellors.

The supervisory team visited each peer counsellor at least once every 2 weeks. During these visits, they checked the peer counsellors' visit forms for completeness. Also, any achievements and challenges were discussed and the way forward was agreed. Interesting experiences were noted by the supervisory team for sharing with the whole group at the subsequent monthly meeting. The supervisory team observed each peer counsellor counselling one mother once a month. After she had finished a counselling session and left the mother's compound, the supervisor gave her feedback on her performance. During these encounters, knowledge and skills were reinforced and the supervisors made field notes about whatever happened.

The supervisory team explained to the peer counsellors the need to understand their experiences with counselling mothers, hence the need to attend some of their counselling sessions. It was hoped that because one member of the supervisory team had trained with them, they would feel freer to be observed by her rather than only the trainers. During

the observation of the counselling sessions, the supervisors tried as much as possible to keep a distance in order not to interfere with the counselling session.

The peer counsellors were invited to monthly meetings with the supervisors at the study office. At these meetings, they presented reports about their activities, achievements and challenges, and these were discussed with the supervisory team. This team revised some topics about breastfeeding in response to knowledge gaps identified during observation of the peer counsellors in the field.

Remuneration of the peer counsellors

The peer counsellors were provided with a small allowance, not a formal salary, of about 10% of a teacher's monthly salary (in this case, around US\$20 per month). This amount was discussed and agreed upon by both the study team and the peer counsellors.

Monitoring of the process

The peer counselling process was monitored by the following indicators. Each of the peer counsellor visits to the mothers was recorded on a visit form, which was given to the supervisors during their visits. The supervisory team made records of visits to the peer counsellors, the observed counselling sessions and the field observations. Minutes of the monthly meetings were recorded as well as the topics discussed at different meetings.

Data collection and analysis

The knowledge of the peer counsellors before and after training was assessed using a pre-test and post-test questionnaire with similar questions. Tallies of selected knowledge and attitude questions for all peer counsellors were computed for the pre-test and post-test, and during intervention. These data were used to identify changes after the training in knowledge and attitudes relating to exclusive breastfeeding. Field notes were used to record all observations made throughout the process. The most frequently occurring issues were identified.

Qualitative methods were used for data analysis. Analysis of data from field observation notes and the interactions with peer counsellors was a continuous process, and emerging themes from the content of the notes were noted and discussed between the study team as observations continued and more notes were made. The first and fourth authors with experience from prior participation in qualitative data analysis were mainly involved in this process. Discussions were held with the rest of the authors to reach consensus on the emerging issues. The first, third and fourth authors also analysed the pre-test and post-test manually, identified the correct answers to the different questions and coded the responses to the open-ended questions. The number of peer counsellors giving the correct responses to different questions in pre-test and post-test were identified and summarized as frequencies. Verbatim quotations were used in presenting some of the study findings.

Ethical approval was obtained from the Makerere University Medical School Research Ethics Committee.

Results

Community involvement

Meetings called by the community leaders for the purpose of selecting peer counsellors were well attended except in one village, where some husbands were initially sceptical about the aim of the study. The husbands allowed their wives to participate after further explanations about the study. All the women selected for training as peer counsellors were accepted by the village meetings. The elderly women were vocal during these meetings, and the younger women tended to seek their opinion before taking decisions.

All the peer counsellors reported that introducing themselves to the mothers, and explaining they had been selected at a community meeting to be trained as peer counsellors to help women with breastfeeding, made the mothers more responsive to their visits. One peer counsellor initially experienced problems with a few mothers who thought she was soliciting for votes, since the study started around the time that national and local elections were about to take place.

It was observed that the women had to seek their husbands' permission to participate in the study. The few refusals encountered were because the husband had refused to let the wife participate. Furthermore, the grandmothers seemed to have a lot of influence over the younger women because they seemed to be able to influence their sons' decisions.

Knowledge about the process of breastfeeding by peer counsellors before and after training

Before training

Before training, more than half of the peer counsellors were knowledgeable about most recommended aspects of breastfeeding. The majority did not know what increases breast milk production or how to continue breastfeeding while away from home, and thought it was necessary to clean the breasts before a breastfeed (Table 2). Almost all the peer counsellors said 'eating well' was responsible for increasing breast milk production. Only one peer counsellor had correct knowledge about the causes of leakage from breasts. The rest thought that women who had leaking breasts had a lot of breast milk and attributed this to 'eating well' as well as eating a wide variety of foods. Approximately half had correct knowledge about the causes of painful breasts during breastfeeding and the proper duration of a breastfeed.

After training

After training and 10 months of practice as peer counsellors, there was an increase in knowledge on all aspects of breastfeeding. However, a few peer counsellors could not define exclusive breastfeeding correctly (Table 2).

Regarding what increases breast milk production in a mother, more than half gave the right answer immediately after training and almost all after 10 months. It was notable that more peer counsellors started describing the physiological ways of increasing breast milk during the follow-up period. Two of them were still unable to report 'frequency of

Table 2. Knowledge about process of breastfeeding by peer counsellors before and after training

Correctly defined/explained	Before training		After training		After 10 months of counselling	
	Yes	No	Yes	No	Yes	No
Exclusive breastfeeding	9	3	10	2	10	2
Optimal duration of EBF	11	1	12	0	12	0
Timely initiation of breastfeeding	9	3	12	0	12	0
Duration of a breastfeed	7	5	11	1	10	2
Removal of baby from breast after a feed	9	3	12	0	12	0
Breast milk as the best first feed for the baby	11	1	12	0	12	0
Baby should feed on colostrum	8	4	12	0	12	0
What increases breast milk production	2	10	8	4	10	2
How to continue EBF when mother is away from home	4	8	12	0	12	0
That breast milk can be expressed and given to sick babies	6	6	12	0	12	0
That a baby can feed on expressed breast milk	5	7	12	0	12	0
That cleaning of breasts before breastfeeding is not necessary	2	10	7	5	12	0
Causes of painful breasts during breastfeeding	6	6	11	1	7	5
Causes of leaking breasts	1	11	1	11	2	10

EBF, exclusive breastfeeding.

putting a baby on the breast' as a major factor in increasing breast milk production even after 10 months of intervention.

Immediately after training and after 10 months of peer counselling, only two peer counsellors gave the correct answer about the causes of leakage from breasts. The physiological causes of leaking breasts, which were discussed during the training and follow-up process, did not seem to be remembered by all the peer counsellors. In this aspect, hardly any improvement in knowledge was observed during training (Table 2).

Immediately after training, almost all the peer counsellors had acquired correct knowledge about the causes of painful breasts during breastfeeding and the proper duration of a breastfeed. During the follow-up period, however, some seemed to have lost this knowledge (Table 2).

Attitudes of the peer counsellors towards the process of breastfeeding before and after training

Feeding babies with colostrum

Although two thirds of the peer counsellors said that newborn babies should be fed on colostrum, the rest

took the view that colostrum should not be fed to babies and gave various reasons. Before training, one peer counsellor said,

... it (colostrum) is dirty since it is the first milk,

while another said,

... this milk (colostrum) is left-over milk from the last baby that was breastfed. It is therefore not good to give it to the baby.

Some felt colostrum was not good because of its appearance. One peer counsellor said,

... I do not believe colostrum is good for the baby because of the way it looks like.

Some, however, felt colostrum was good. One peer counsellor said,

... colostrum is good as it helps open up the baby's intestines.

While another said,

... colostrum makes the baby wiser.

Following training, all the peer counsellors' attitudes had changed and they all believed that colostrum was very nutritious and protective against diseases. One peer counsellor said,

... colostrum helps in normal growth of the baby as it contains the perfect nutrients,

and another said,

... colostrum is good milk. It immunizes the baby.

Expressing breast milk

The general feeling was that breast milk should not be released from the breast by expressing it as it becomes contaminated with germs. One peer counsellor took the view that the practice could even lead to breast cancer. Another said,

... breast milk should not get out of the breasts into a cup otherwise it loses value,

and another said,

... It looks bad as you are milking a human being!

While another said,

... Once breast milk is out of the breasts it is spoilt milk and it can make the baby sick.

After training, all the peer counsellors were positive about expressing breast milk. They were able to cite circumstances when it should be done and stated that it helps mothers to sustain exclusive breastfeeding. One said,

... expressing breast milk is a good thing; it helps a baby to continue feeding on mother's breast milk even when she is away from home,

while another said,

... If your baby is sick you express breast milk and give the baby. It is good for the baby.

And another said,

... expressing breast milk helps working mothers to continue breastfeeding their babies exclusively.

One peer counsellor shared with the group her personal experience of being helped by midwives to express her own breast milk for one of her babies who was unwell after birth. This seemed to 'break the ice' and the other peer supporters asked whether the baby survived and how it was doing. On being told that that

the baby was now in secondary school, the peer counsellors expressed surprise, and this seems to have contributed to their change in attitude towards expressing breast milk for babies.

Cleaning of breasts before breastfeeding

While some peer counsellors wrongly believed that it was important to clean the breasts before breastfeeding, this attitude changed after the training. They were able to give the correct explanation that 'breasts have their own oils' that keep the nipples clean and moisturized, and protect them from cracking.

Before training, one peer counsellor said,

... the breasts can have germs on them, you have to clean them in order to get rid of the germs and dirt,

while another said,

They should be cleaned first in order to remove the sweat and dust after the mother has been working in the garden.

After training, one peer counsellor said,

... it's because the breast has its own fats/oils and if a mother keeps cleaning this off, the nipple will get cracks.

Yet another said,

... breasts have their own cleansing mechanisms so a mother should take regular baths only.

Peer counsellors' experiences with the process of training and supporting their peers

Training seems to have been both a learning and a relaxation exercise for the peer counsellors. One peer counsellor observed during training,

But we have to be very attentive and learn what we are going to teach our fellow women back home. We should not disappoint our trainers.

And another said,

... it is good for us also to have one week of relaxation from our home chores. Let our husbands also look after the families while we are away.

The fieldwork was a different type of learning because they improved their own practice, got to know more people in their communities and benefited financially.

One peer counsellor attended the training while she was expecting a baby and she initiated breastfeeding soon after delivery, did not give pre-lacteals and breastfed exclusively for 6 months. She took her baby on visits to the mothers and would even demonstrate to them how to position a baby on the breast using her baby on her own breasts. She commented during one of the monthly meetings,

For me, I move with my baby when I go to visit mothers and I breastfeed my baby whenever he demands. I even show mothers how to position a baby on the breast using mine which helps mothers to appreciate and learn.

Another peer counsellor with a young infant at the time of training was motivated to breastfeed exclusively for 6 months.

During the follow-up period, the peer counsellors reported that mothers would come to consult them before taking up advice offered by other people about feeding their infants. During one observation visit, one mother said,

My friends were telling me to introduce some milk to my baby at three months but I refused. I decided to first ask the peer counsellor who has been taking the trouble to come to my home to teach me and she told me to wait till baby is six months.

The peer counsellors also reported that visiting and supporting mothers had helped them to interact more closely with many people in their communities. Many reported that they had made new friends through the process. One said,

... through peer counselling and visiting mothers, I have come to know more people in my community. I have even made more friends. Some women call me when I am passing by their homes saying I have not visited them in a long time. But of course I have to visit them according to the schedule given to us by the study team.

Furthermore, they were happy with the monthly allowance they received from the study team as it contributed to their family income, as one observed,

... this allowance has really helped us. Now we can afford to have soap at home all the time and we don't have to keep nagging our husbands for some minor family needs.

Many mothers tended around the time of birth of the baby to leave the homes from which they had been recruited. Some mothers in the intervention areas were staying with their parents or other relatives and would go to their husbands' homes after delivery. This was common among young single mothers. On the other hand, many married women went to visit their parents after delivery. This meant that the peer counsellors could not find them at home for their scheduled visits and they had to reschedule them. Such movements by the women presented the peer counsellors with the challenge of ensuring that the mothers attended the scheduled counselling sessions.

Expectations from the counselled mothers

From the continuous support and discussions, several expectations were raised by the counselled mothers. They wondered whether the team would offer food items to support complementary feeding and health care for the babies. The study infants were referred to by their mothers as 'your babies' whenever they talked to the peer counsellors.

At the beginning of the intervention, some mothers who were visited seemed to think that the peer counsellors could not teach them any useful information. However, with repeated visits, the mothers started to appreciate that the peer counsellors had useful information to share with them about breastfeeding as they realized that it worked well for their babies.

The role of the other stakeholders in infant feeding

Most grandmothers welcomed the peer counsellors and sat in to listen, and even participated in the discussions, during counselling sessions. However, one peer counsellor reported an incident where the grandmother stopped her from visiting and helping her son's wife with breastfeeding. This grandmother

insisted that because she had managed to breastfeed and care for her own children without peer support, her son's wife could do the same. Her son was convinced by her argument and told the wife not to entertain any counselling in their home. This mother told the peer counsellor to keep away although she was interested in what the peer counsellor had to offer.

Whenever they were at home during visits, the husbands hailed the peer counsellors' work as important and some showed interest in listening to what they had to share. The peer counsellors encouraged the mothers to invite their husbands or other persons within their households who were helping them with breastfeeding to attend the counselling sessions. During the supervision visits, the study team observed that whenever the husbands were at home, they would receive and welcome the team. After being told what the visit was about, most would excuse themselves to go and attend to other chores despite being invited to stay and participate in the session. One husband commented,

... this is very good. It is high time our women started helping each other with this breastfeeding issue. You go ahead and discuss as I run some errands'.

Discussion

This implementation in Mbale, Eastern Uganda, demonstrated that peer counselling could conveniently be introduced in this setting. Important elements to consider in scaling-up such an intervention are highlighted in Box 2 and briefly discussed below.

Community involvement

Community involvement from the initial stages, using existing community leadership structures to mobilize women, was a useful strategy in ensuring that the whole intervention was implemented smoothly. This is an important aspect to consider in the event of scaling-up. The strategy ensured that the selected peer counsellors were acceptable to the communities that chose them, and this may have contributed to the

Box 2. Implications from this study on any scaling-up of peer counselling for exclusive breastfeeding in similar environments

Peer counselling interventions in similar settings should consider:

Interactions with the community

- Using existing community leadership channels help to gain confidence of the community
- Sensitization of the community about the study at the onset of the study so as to avoid undue expectations, which cannot be satisfied by the available resources
- Understanding the social dynamics and power structures at the family and community level helps to avoid collisions during the study period
- Understanding who the other stakeholders concerned with infant feeding are in order to involve them in the peer counselling process
- Stay clear of other projects/political rallies with different goals and possible other remuneration schemes.

Implementation

- Adequate training of the peer counsellors before they embark on counselling mothers, as they are assessed by the mothers and accepted depending on the quality of what they deliver
- Continuous support supervision of the peer counsellors by the study team helps them to improve their knowledge and skills as well as boosting their morale
- The peer counsellors need to be allowed some degree of flexibility regarding timing of visits in order for them to easily fit them into their regular schedules
- Maintaining an allowance for the peer counsellors helps to keep them well motivated to continue helping mothers
- In order to plan the practical part of the peer counselling, there is a need for a thorough understanding of the behaviours and practices of the community women after childbirth, for example, where they go and what they do.

retention of the trained peer counsellors throughout the entire study period. Similar sentiments were reported in a broad scale programme in Ghana, Madagascar, and Bolivia, where involving the communities in breastfeeding promotion activities led to the success of the programme (Quinn *et al.* 2005).

Four elements need to be considered in planning a similar intervention: competing activities, routines around childbirth, community expectations and the power structure at household level. First: at any time, there are a number of competing activities in the

community and an intervention should not be considered in isolation because the players are always the same. Some activities may compete for time with the planned intervention so the social events calendar needs to be considered, for example, political campaigns or prolonged cultural rites and ceremonies. Second: in this community, women commonly move after childbirth. For scaling-up, it is important to understand what women do in the period surrounding the birth of a baby. This knowledge could reduce the potential loss to follow-up in the event of movements. Third: community expectations need to be anticipated and dealt with through dialogue to avoid misunderstandings about how the participants in the study will benefit from it.

Fourth: the social power structure and the gender roles at household level and in the wider community need to be understood in such an intervention. In this study, men made the decisions for their wives to participate. In a few instances, the grandmothers exerted their authority and interfered with the woman's participation in the study. These are important stakeholders who should be mobilized if such an intervention is to succeed. A similar observation was made in Bangladesh, where domineering grandmothers were cited as one of the reasons for failure of breastfeeding counselling (Haider *et al.* 1997). However, once convinced about the importance of the peer counsellors' messages, they present a useful resource as far as social support for the breastfeeding women is concerned. This was also reported among low-income women in the United Kingdom, who said that seeing relatives and friends breastfeed helped to increase their confidence and commitment to breastfeeding (Hoddinott & Pill 1999).

Training and peer counsellors' knowledge and attitudes towards breastfeeding

From our experience, it is clear that such an intervention needs two things: initial training, and continuous support and supervision for the peer counsellors. The peer counsellors' knowledge improved more markedly in aspects where it was easy to give simple, easily understood messages, for instance, feeding babies on colostrum and expressing breast milk. It took longer

for the peer counsellors to appreciate knowledge about issues related to understanding the physiological mechanisms of breastfeeding. Similar findings were reported in earlier studies, where training of peer counsellors led to improved knowledge about breastfeeding as well as confidence in talking to and supporting the mothers (McInnes & Stone 2001; Haider *et al.* 2002; Ingram *et al.* 2005). However, with continued supervision and support by the supervisors, their knowledge concerning these mechanisms continued to improve. Some pre-existing beliefs in the community concerning aspects of breastfeeding – for example, what increases breast milk production – could slow down the peer counsellors' learning during training. The study highlighted the importance of continued support for the peer counsellors as they help the mothers, so that over time, they can understand the more difficult issues and continue to improve their skills. The importance of continued support during the intervention was also highlighted in earlier studies (McInnes & Stone 2001; Haider *et al.* 2002). However, this raises the issue of sustainability in case of scaling-up the intervention, as it may become costly and should be considered during planning. This is where already existing structures could be used, for example, existing community health workers could be equipped with extra knowledge and skills to supervise the peer counsellors.

Colostrum was regarded with mixed feelings at the beginning of training, with many referring to it as 'dirty' or 'left-over milk from feeding the previous child', so it was considered unsuitable for feeding newborn babies. Similar sentiments were reported in a West African study, where women thought colostrum was bad for babies because it looked like pus (Semega-Janneh *et al.* 2001). This calls for detailed explanations about colostrum during the training so that the peer counsellors' attitudes to it are influenced positively. The training had this effect, and they continued to promote its importance to newborn babies among the mothers they counselled. This is important because early initiation of breastfeeding, which involves feeding babies with colostrum, forms a basis for exclusive breastfeeding practice.

Some women's beliefs about certain infant feeding practices can be built upon to strengthen knowledge

among mothers. An example is the belief that colostrum opens a baby's intestines. This can be used to teach mothers about the purgative effect of colostrum, which is useful in clearing the gut of the sticky meconium during the first days of life. It is therefore important to explore what the peer counsellors think about such aspects of breastfeeding before training in order to address their learning needs correctly.

On the other hand, the implications of some messages need to be considered and discussed during training. For example, peer counsellors might infer that because colostrum protects the baby against some illnesses, babies who take it would not require the Extended Program of Immunization (EPI) vaccines during childhood. In our study, the training clarified this, and indeed, the study team observed that the peer counsellors advised the mothers to take their children for immunization during the follow-up period.

In our intervention, we noticed a complete change in attitude after training about expressing breast milk for feeding babies, an important element in maintaining exclusive breastfeeding. The negative attitude initially expressed against expressing breast milk was mainly related to beliefs in the community. A similar finding was reported in a West African study, where it was believed that if breast milk was expressed and it poured on to the ground, the mother's milk would dry up (Semega-Janneh *et al.* 2001). This is important because use of expressed breast milk helps mothers to continue with exclusive breastfeeding even when they have to leave their babies at home while they run errands elsewhere.

Implementing peer counselling

Continued support supervision of the peer counsellors was crucial for their continually improving knowledge and skills as well as their motivation and improved confidence. They were confident enough to ask whatever they were not sure about and to refer difficult questions to the supervisors. The interaction between the peer counsellors and the supervisors contributed to building the mothers' confidence in them. A similar finding was reported in Bangladesh, where the availability of supervisors increased the

peer counsellors' confidence as well as their credibility with the mothers (Haider *et al.* 1997; Muirhead *et al.* 2006). Supervision encouraged the peer counsellors to do their work, as they felt accountable to the supervisors. However, this raises issues about the costs and sustainability of an intervention where close supervision is required.

Allowing the peer counsellors some flexibility in planning their visits within the framework of timed peer counsellor visits made them to feel they were in control of their time. They were able to fit the visits in with their regular schedules of work. This helped to keep them motivated, as they sometimes had to make multiple trips to a mother's home, if they missed her on the first attempt, until they found her or declared a missed visit. This also shows the high level of interest among the peer counsellors as well as their appreciation of the importance of giving the mothers all the visits. A similar experience was reported in another study, where peer counsellors and mothers regulated the visits depending on the mothers' needs (McInnes & Stone 2001). In that study, however, the peer counsellors did not have a fixed number of visits for each mother, as in the current study.

On the other hand, the peer counsellors realized that the experience of visiting mothers helped them to establish more friends and acquaintances in their community. This is not surprising, and has been reported by other researchers (McInnes & Stone 2001; Dennis 2002; Ingram *et al.* 2005). The small allowances they received from the study contributed to their family incomes. That could have made them feel motivated to carry on with the peer counselling, as reported in other studies where the peer counsellors felt their status in the community had been uplifted (McInnes & Stone 2001; Ingram *et al.* 2005).

This study had some limitations. It was small, involving only 12 peer counsellors recruited for the PROMISE-EBF study, and there was no comparison group. In addition, these peer counsellors were trained and followed up by a highly trained and experienced team, which could be difficult to replicate in case of scaling-up the peer counselling to cover larger areas. An inherent weakness in the design is that the training and supervisory team also performed the 'evaluation'.

Conclusion

Involving communities in the selection of peer counsellors for promotion of breastfeeding helps to identify those who will be accepted readily by the mothers and likely to be retained. Other important issues to consider for scaling-up include training and follow-up of peer counsellors, which lead to improved knowledge and attitudes towards the practice of exclusive breastfeeding. Peer counsellors need to be trained initially and followed up continuously in order to reinforce their knowledge and skills as well as to keep them motivated. In our case, a small remuneration also helped to maintain motivation.

Authors' contributions

All authors participated in the design and planning of the study; the fieldwork was conducted by JN and NS, supported by GN and JKT; the analysis and write-up were done mainly by JN and TT. All authors read and approved the final manuscript.

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Conflicts of Interest

The authors declare that they have no competing interests.

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Supporting information

Additional Supporting Information may be found in the online version of this article:

Appendix S1. Pre-test questionnaire for the peer supporters on knowledge, attitudes and practices towards EBF (exclusive breastfeeding)

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