Journal of Midwifery & Women's Health www.jmwh.org
Original Research

Use of Mobile Video Show for Community Behavior Change on Maternal and Newborn Health in Rural Ethiopia

Binyam Fekadu Desta, MPH, Hajira Mohammed, MSc, Danika Barry, MPH, Aynalem Hailemichael Frew, RN, MPH, Kenneth Hepburn, PhD, Christine Claypoole, MA

Introduction: A number of factors affect Ethiopia's efforts to meet Millennium Development Goals 4 and 5 to reduce maternal and newborn mortality. The Maternal and Newborn Health in Ethiopia Partnership (MaNHEP) project, as part of its overall strategy, implemented behavior change communication interventions to increase women's demand for and use of antenatal, birth, and postnatal services. Seeking to reach "media-dark" areas, MaNHEP implemented a mobile video show focused on maternal and newborn health. We report on the effect of the mobile video show on community knowledge, attitudes, and beliefs regarding maternal and newborn health, especially regarding care-seeking behavior and use of a skilled attendant for birth and postnatal care.

Methods: Two main data sources are used: qualitative data gathered through mobile video show participant discussions in 31 randomly selected *kebeles* (villages with about 1000 households) and focus groups in 4 *kebeles* (2 from each region), and quantitative data generated from 510 randomly selected adults participating in MaNHEP's endline survey. Qualitative data were thematically analyzed by the research team, and the accuracy of the transcriptions and categorization was also checked.

Results: The mobile video show reached a total of 28,389 mostly young or adult females in 51 *kebeles*. At endline, mobile video show attendees (vs nonattendees) reported significantly ($P < .001$) higher rates of recall of key MaNHEP messages about use of health extension workers for pregnancy registration, labor and birth notification, and postnatal care. Qualitative analysis yielded 3 overarching themes: mirrors to the community (the portrayal is accurate); call to action (we have to change this); and improvement ideas (suggested positive actions).

Discussion: The entertaining nature and local organization of the mobile video show event encouraged attendance. Building the video around recognizable characters (particularly the husbands) contributed to bringing about desired changes in people's knowledge and beliefs. Making the show readily available (through the mobile van) and bundling it with facilitated reflection sessions had a considerable impact on people's knowledge and confidence.
J Midwifery Womens Health 2014;59:S65–S72

Keywords: maternal and newborn health, behavior change communication, community action

INTRODUCTION

Ethiopia, a country with high rates of maternal and newborn mortality, is strongly committed to meeting Millennium Development Goals 4 and 5 to substantially reduce maternal and child mortality by 2015 from the current high figures (maternal morality ratio, 676/100,000 live births; neonatal mortality rate, 37/1,000 live births).[1] A number of factors retard goal attainment, however. Distance to functioning health centers and financial barriers are major structural factors. In addition, deeply engrained cultural norms continue to deter birth in health facilities. Such norms promote involvement of family members and traditional birth attendants (TBAs, rather than skilled attendants) and the use of detrimental practices such as breastfeeding delay, providing food other than breast milk, discarding of colostrum, immediate bathing of newborns, and applying substances like butter or cow dung to the umbilical stump that lead to newborn morbidity and mortality.[2]

There is consensus that a package of evidence-based practices, beginning with pregnancy identification and appropriate antenatal care and leading to adequate birth preparation, continuing through a core set of birth practices, and extending through near-term postnatal care with access to adequate emergency care, is the minimum necessary for maternal and newborn survival and well-being.[3] Implementing such maternal and newborn health practices requires strategies that account for the actualities in low- to moderate-income, largely rural, often very traditional societies. In particular, women's and families' awareness of and demand for skilled care before, during, and after birth needs to be expanded.[4]

Supported by the Bill and Melinda Gates Foundation, the Maternal and Newborn Health in Ethiopia Partnership (MaNHEP) project undertook to ensure that the package of evidence-based practices would be provided to every woman every time immediately prior to birth, at birth, and within 48 hours after birth. MaNHEP focused on a set of 51 *kebeles*, lower administrative units below a district/*woreda*. Each *kebele* has an average population of 5000 people or 1000 households, in 2 regions: Amhara and Oromia. As part of its overall strategy, the MaNHEP project implemented a series of behavior change communication strategies to increase women's demand for and use of antenatal, birth, and postnatal care services and resources.

Behavior change communication interventions are often deployed in conjunction with other methods to bring about changes in the health behaviors of targeted populations. They

Address correspondence to Binyam F. Desta, P.O. Box 184050, Addis Ababa, Ethiopia. E-mail: binyamfe@gmail.com

Quick Points

- Use of mobile video promotes access to behavior change communication for "media-dark" rural populations.
- Well-developed mobile video (professionally produced with input and guidance from content experts) can create a *translation* effect: participants will relate personally to the material and identify with its relevance to their lives.
- An effective behavior change communication intervention will empower its audience to imagine solutions and commit to making them happen.
- Key messages were retained by the attendants of the show.

can employ a number of media (eg, print, broadcast, video) to convey their message. Numerous observational studies, a typical evaluation strategy,[5-7] have shown credible associations between changes in behavior and exposure to behavior change communication.[8-10] A number of theoretical frameworks undergird behavior change communication efforts. Those that appear to have the greatest success attempt to create an emotional link between the target viewer and the message so that the viewer can imagine himself/herself in the situation of those being portrayed and can act in the ways that are recommended. This emotional "transportation"[11] is meant not only to delineate a proper course of action but also to create a predisposition toward and confidence in one's ability to carry out that course of action.[12-15] In general, there is growing consensus that a given behavior is more likely to occur if the intention to practice that behavior is strong,[16] if there are no environmental barriers to performing it, and if the individual has the skills to perform the behavior.

There are challenges to implementing behavior change communication in Ethiopia, especially because of the poor access and exposure to mass media in Ethiopia. According to the 2011 Ethiopian Demographic and Health Survey, only 41% and 10% of households have radio and television, respectively; 25% have mobile telephones; and 5% have nonmobile telephones. Respondents were more likely to listen to the radio (22% of women and 38% of men) than to watch television (16% of women and 21% of men) or to read newspapers (5% of women and 11% of men) at least once a week. Surprisingly, 68% of women and 54% of men have no exposure to any of the 3 mass media modalities.[2] Moreover, the adult literacy level in 2011 was low in Ethiopia (59.1%), and only half of female adults (50.6%) were literate.[23]

Seeking to reach underserved segments of the population, MaNHEP produced a one-hour and 40-minute mobile video, "The Road to Life and the Road to Death," available in Amharic and Afan-Oromo, the dominant languages of the project's target regions. The video compares the pregnancy and birth experiences of 2 fictional families. In the first family, the pregnant woman, along with her husband and other family members, attends meetings similar to MaNHEP's Community Maternal and Newborn Health (CMNH) family meetings, which educate the family on common problems related to maternal and newborn care and actions for those problems in 4 rounds by volunteers.[17] As a result, the woman and her family are prepared for birth and know what to do to ensure the health of the woman and her newborn. This mother and newborn receive help from her husband, a health extension worker, and a trained community health volunteer during the postnatal period, and all goes well. The husband in the second family—an autocratic person addicted to alcohol—does not allow the mother to attend CMNH family meetings, will not accept offered help from a health extension worker or her friend (a trained community volunteer), provides no care for her, and makes her work hard late into pregnancy. This woman and her newborn die, after which the husband changes and promises to teach the community through his example.

MaNHEP outsourced production of the video. The script was developed in consultation with the project team and used MaNHEP's technical materials (eg, the Take Action Cards—pictorial presentation of problems and actions that need to be taken before, during, and after birth). Local residents and well-known artists were recruited for the filming. A draft version of the video was reviewed by the project team and pretested at selected intervention sites. A final version incorporated the comments of the staff and community members.

The video was shown in 51 *kebeles*, from December 2011 through February 2012, using projection equipment housed in a mobile van. Shows were held at a variety of locations, including school compounds, farmers' training centers, *kebele* administration buildings, and open spaces. Local teams composed of community volunteers, *kebele* administrators, health extension workers, health center and *woreda* health office coaches, and MaNHEP staff organized and conducted the shows and the follow-up session. To ensure standard presentation, each MaNHEP staff member received an orientation and a written guide on how to organize the show. After the video was shown, the coaches and MaNHEP staff led an objective-reflection-interpretation-decision (ORID)[23] exercise in which the audience was encouraged to comment on the content of the video, link the video to their own knowledge and practices, and discuss the role they were likely to play in birth events.

This article reports on the use and outcomes of the mobile video show and accompanying participatory discussion exercises and the influence they exerted on participating communities' knowledge, attitudes, and beliefs regarding maternal and newborn care, especially with regard to care-seeking behavior and use of a skilled birth attendant for birth and postnatal care.

METHODS

Sources of Data and Analysis

This article considers both qualitative and quantitative data. For the former, data were gathered through reflection exercises and focus group discussions after the show; for the

Table 1. Key Questions for the Focus Group Discussions

1. What have you learned from the show?
2. Do you think such practices exist in your community? (Extent, who practices, why)
3. What should be done to change the practice? (who should do what, how)
4. What will be your role to change the practice/what will you do?

latter, elements of the MaNHEP endline survey of adults aged 18 years or older and activity attendance sheet/report were considered.[18] Full ORID discussions/exercises were documented in 31 randomly selected *kebeles*. In each ORID, MaNHEP staff posed open-ended questions after each presentation to elicit participants' understanding of the issues associated with pregnancy and birth in the community and to explore the roles participants might play in these situations in the future. The questions and responses were captured through audiotaped recordings and field notes. Four *kebeles* (2 from each region) were selected for focus group discussions. Each focus group discussion included 5 to 7 persons selected from the audience. The focus group discussions, conducted by local and MaNHEP staff, focused on key questions shown in Table 1. The ORID exercise and the focus group discussions yielded 104 records.

Two members of the research team transcribed the field notes and tape recordings in the local language and translated the transcripts into English; 12 randomly selected transcripts were checked against the recordings for accuracy. The translated transcripts were analyzed using thematic analysis, and 2 members of the research team independently identified key themes in the transcripts and compared and discussed their findings to achieve consensus. Two team members then independently categorized the data for each of the identified themes. A third team member checked the categorized items for consistency. Minor revisions were made to the thematic analysis, where appropriate. Summaries of the findings were checked for accuracy by all members of the research team.

The endline survey (May-July 2012) randomly questioned 510 adult men and women aged greater than 18 years living in the 51 MaNHEP project *kebeles* in Amhara (136 men and 134 women) and Oromiya (119 men and 121 women). Survey methods including data management and analysis are described elsewhere.[17] Bivariate analyses were performed to assess regional differences in exposure to MaNHEP behavior change communication activities/the mobile video show, as well as topics recalled and where the respondent reported having heard of key health messages. Four key health messages related to pregnancy registration and labor and birth notification with health extension workers were examined to see if respondent recall varied by mobile video show exposure status. All analyses were performed in SAS version 9.3 (Cary, NC), using 2-sided Fisher's exact tests ($\alpha = .05$).

Ethical Considerations

The parent MaNHEP protocol was judged exempt by Emory University and Addis Ababa University institutional review boards and approved by the Federal Ministry of Health and Amhara and Oromiya Regional Health Bureaus in 2010. Respondents' informed consent was obtained before recording the response for each question.

RESULTS

The mobile video show had excellent audience penetration: based on the report, a total of 28,389 people attended the show from the 51 *kebeles* (an area where 12,000 births were expected). The attendance tally sheet depicted the number of attendance in each group by type of provider, age of community member, and number of pregnant women. Most of the attendants were young or adult females (Table 2).

Of the total 510 respondents included in the endline survey, nearly one-third of them reported having attended the mobile video show (Table 3). The most frequently recollected messages from the mobile video show were women and newborn problems (69%), birth preparedness (63%), and labor and birth notification (54%), all key MaNHEP themes. Of greatest importance, those who attended the mobile video show (vs nonattenders) reported significantly ($P < .001$) higher rates of recall of key MaNHEP messages about the use of health extension workers, including pregnancy registration, start of labor notification, and birth notification (Table 4).

Qualitative analysis yielded 3 overarching themes in the objective-reflection-interpretation-decision discussions and focus group discussions data.

Mirror to the Community

Participants indicated that the mobile video show accurately portrayed their communities and homes and succeeded in transporting them into situations with which they could connect. One participant indicated that "the show helped us to judge our own practice at home."

Participants affirmed that both types of husbands existed in their community, and they were familiar with the negative and positive outcomes portrayed in the 2 situations. Beyond that, however, they indicated they understood the importance of the good husband's actions. As one male stated:

This is evident in the video show. The one who ends up with a big sorrow of his wife's death wasn't willing enough to accept the advice from health extension workers and refused to take his wife to health centers for birth.

Participants acknowledged that communities are not generally aware of pregnancy-related problems or the availability and benefits of facility-based birth services and are not willing to accept medical advice from health extension workers (for example, that pregnant women should reduce their household workload). They affirmed that since, traditionally, male household heads control all decisions around pregnancy, it is difficult for women to seek antenatal care or postnatal care without his support. Participants pointed out that these mores are so strong that women often do not disclose their pregnancies to their husbands during the first trimester. Recognizing this, a participating husband admitted, "… [I]f I would have taken her to the health center soon when she started feeling pain, I would have saved my

Table 2. Attendants at the Mobile Video Show by Region and Type of Audience in Amhara and Oromiya Regions, December 2011 to January 2012

	Pregnant	Elders (>65 years)		Youth (15-30 years)			Guide and	Adult		
Site Name	Women	M	F	M	F	Children	QI Teams	M	F	Total
Kuyu	286	211	226	2209	2842	1482	117	659	506	8529
Degem	111	45	205	386	95	255	59	411	1939	3506
Warajarso	227	434	239	632	601	591	178	266	326	3514
Subtotal (Oromiya)	**624**	**690**	**670**	**3227**	**3538**	**2328**	**354**	**1336**	**2771**	**15,549**
North Achefer	132	493	274	664	689	409	126	665	566	4008
South Achefer	32	150	124	490	778	802	104	829	449	3758
Mecha	86	532	327	957	1337	370	138	789	538	5074
Subtotal (Amhara)	**250**	**1175**	**725**	**2111**	**2804**	**1581**	**368**	**2283**	**1553**	**12,840**
Grand total	**874**	**1865**	**1395**	**5338**	**6342**	**3909**	**722**	**3619**	**4324**	**28,389**

Abbreviations: F, female; M, male; QI, quality improvement.

baby…," and a female respondent shared, "I could have been spared from the harm and agony if my husband had taken me to a health center for medical checkup during my pregnancy."

Responding to the mobile video show messages encouraging use of skilled providers instead of or in conjunction with TBAs, participants acknowledged the strength of the TBA tradition within the community. One male participant said that, "Our biggest problem is thinking of TBAs as angels who are sent to save the lives of mothers and their babies, ignoring the experienced birth attendants at health centers." This belief leads most women to give birth at home with assistance only from TBAs or relatives. Confronting this belief, in light of the mobile video show message, one participant said, "TBAs are still misleading the society by saying that they can deliver their babies safely. Due to these problems, many farmers resist following the advice of health extension workers."

Participants did indicate that change was taking place. They recognized that various community-level efforts such as house-to-house education visits by health extension workers and MaNHEP's CMNH family meetings and quality improvement efforts are beginning to be taken up by the community, resulting in improved care and outcomes. Focus group discussants reported approvingly that, recently, some husbands have allowed their wives to receive antenatal care and are assisting their wives in household chores. One participating husband proudly reported, "When she got pregnant with another baby, I took her to a health post, and she went through antenatal care as per the schedule, and we had our baby safely. I was so thrilled having a healthy baby with my wife in my arms." Participants reported other positive behavior changes: husbands have started to save money for an emergency during the pregnancy, and mothers are covering their newborns with clean sheets directly after birth and waiting 24 hours to wash the newborn.

Call to Action

A powerful theme that emerged from the exercises and focus groups was that things have to change. A clear focal point of change is the attitude and behavior of husbands, who play such a critical decisional role in the lives of pregnant women. Reflecting on the value of mutual respect promoted in the mobile video show and the consequent need for appropriate antenatal, birth, and postnatal care, one male participant urged: "…[F]or whom are we going to care if not for our wife?" Another man, commenting on the mistreatment of pregnant wives (eg, being overwhelmed by household chores or being denied antenatal care), said: "…He [the husband] shouldn't enjoy the pleasure of being served by his wife at the expense of her welfare." One man issued this call to action: "…[We] men who have watched this film must come to our senses and make ready ourselves for change."

Viewers said that they had internalized the mobile video show messages and suggested ways in which they planned to enact them immediately in their own lives. Men and women indicated that they would have periodic medical check-ups, get timely maternal and newborn health education and antenatal care, avoid harmful traditional practices, give birth in health facilities with the help of skilled professionals, seek health care for their newborns from health centers, and consult with health extension workers and other health professionals on nutrition and postnatal care. One respondent summed up this personal responsibility: "We can only avert this problem if we . . . end all the harmful traditions we have in our society and listen to what health extension worker is telling and teaching us and put them into effect." More pragmatically, participants saw the need to save money for emergencies during pregnancy and birth, and afterwards one participant emphasized: ". . . [T]o improve our saving culture, all individuals should be a member of the saving and credit association."

Future-oriented reactions also extended to the responsibilities those who viewed the videos should assume to ensure the well-being of mothers and newborns. Participants felt that anyone who saw the mobile video show had an obligation to increase the awareness of the community at large about maternal and newborn health problems and care. As one viewer expressed it, "I wish I could have seen this film in the past so that we could have saved a lot of lives."

Participants endorsed maternal and newborn health as a communal and societal responsibility, but they recognized its

Table 3. Characteristics of Adult Community Members (Men and Women Aged 18 Years and Older) in Amhara and Oromiya Regions, MaNHEP Adult Endline Survey (May-July 2012)

Characteristics	Amhara, n (%) (n = 240)	Oromiya, n (%) (n = 270)	Total, n (%) (n = 510)	*P* Value
Saw the BCC video drama	62 (26.1)[a]	110 (40.7)	172 (33.9)	<.001
Topics recalled, among those who saw the drama[b]				
Pregnancy identification	28 (45.9)	39 (35.5)	67 (39.2)	.19
Birth preparedness	37 (60.7)	70 (63.6)	107 (62.6)	.74
ANC registration	31 (50.8)	48 (43.6)	79 (46.2)	.42
CMNH meeting attendance	12 (19.7)	52 (47.3)	64 (37.4)	<.001
Women and newborn problems	41 (67.2)	77 (70.0)	118 (69.0)	.73
Labor and birth notification	26 (42.6)	67 (60.9)	93 (54.4)	.03
Bleeding too much	33 (54.1)	46 (41.8)	79 (46.2)	.15
Woman and referral	19 (31.2)	38 (34.6)	57 (33.3)	.74
Postnatal care visits	7 (11.5)	36 (32.7)	43 (25.2)	.002
Other MaNHEP BCC activities experienced[c]				
Songs	23(9.7)	68(26.5)	91(18.4)	<.001
Poetry contest	33(13.9)	71(27.6)	104(21.1)	<.001
Role plays	39(16.5)	66(25.7)	105(21.3)	.02
Where heard of key health messages[d]				
Health center/hospital staff	66 (28.5)	8 (3.9)	74 (16.9)	<.001
HEW	195 (84.1)	132 (64.1)	327 (74.7)	<.001
TBA	52 (22.4)	5 (2.4)	57 (13.0)	<.001
CHDA	82 (35.3)	74 (35.9)	156 (35.6)	.92
Guide team	26 (11.2)	14 (6.8)	40 (9.1)	.13
Quality improvement team	11 (4.7)	15 (7.3)	26 (5.9)	.31
Spouse	16 (6.9)	1 (0.5)	17 (3.9)	<.001
Other relative/friend/neighbor	22 (9.5)	13 (6.3)	35 (8.0)	.29
MaNHEP BCC video/song	26 (11.2)	53 (25.7)	79 (18.0)	<.001
Social gathering or event	24 (10.3)	4 (1.9)	28 (6.4)	<.001
1-in-5 Network model family	2 (0.9)	2 (1.0)	4 (0.9)	1.0
Other	7 (3.0)	1 (0.5)	8 (1.8)	.07

Abbreviations: ANC, antenatal care; BCC, behavior change communications; CHDA, community health and development agent; CMNH, community maternal and newborn health; HEW, health extension worker; TBA, traditional birth attendant.
Note: 2-sided Fisher's exact *P* values were used (α = .05).
[a]Missing: Amhara (2).
[b]Missing: Amhara (2); don't know: Amhara (1).
[c]Missing: Amhara (2); don't know: Amhara (1), Oromiya (13).
[d]Missing: Oromiya (1); don't know: Amhara (8), Oromiya (63).

complexity. Many pointed to the need for a multifaceted effort with multisectoral and multilevel involvement, including government agencies but also *kebele* administration, health extension workers, religious leaders, social organizations, volunteers, school and youth groups, and the whole community. At the same time, reducing maternal and newborn deaths and eliminating harmful traditional practices are tasks that begin with individual commitment:

Like we work hard for our daily bread, I believe we should work hard emphasizing to save the lives of our mothers and children. We shouldn't leave this task to the government and health extension workers; rather, we should all participate to bring about any change.

Improvement Ideas

As part of their overall enthusiasm for the mobile video show, participants made a number of suggestions for ways to improve the program or extend its reach. They suggested extending presentations of the mobile video show to *kebeles* other than those in MaNHEP's area and presenting the videos at regular intervals to draw in more families as they entered pregnancy. They also suggested inviting young people to enhance their knowledge of pregnancy-related problems. They suggested that the videos address problems related to early marriage, a prevalent and dangerous practice. Of note, respondents indicated that the films identified broader challenges to improving maternal and newborn health outcomes: there are few health extension workers, and these are stretched thin

Table 4. Health Messages Heard of Among Adult Community Members (Men and Women Aged 18 Years and Older) in Amhara and Oromiya Regions by Mobile Video Show Exposure, MaNHEP Adult End line Survey (May-July 2012)

Health Messages Heard	MVS, n (%) (n = 172)	No MVS, n (%) (n = 336)	Total,[a] n (%) (n = 508)	*P* Value
Pregnancy registration with HEW	166 (96.5)	283 (84.2)	449 (88.4)	<.001
Birth assistance notification to HEW at start of labor[b]	170 (98.8)	284 (89.6)	454 (92.8)	<.001
When HEW should be notified, among those who had heard of notification				.87
During labor	166 (97.7)	273 (96.1)	439 (96.7)	
Birth to ≤2 days	4 (2.4)	8 (2.8)	12 (2.6)	
>2 days after birth	0 (0.0)	1 (0.4)	1 (0.2)	
Don't know	0 (0.0)	2 (0.7)	2 (0.4)	
Inform HEW when newborn is born[c]	170 (99.4)	274 (84.3)	444 (89.5)	<.001

Abbreviations: HEW, health extension worker; MVS, mobile video show.
[a]Missing: 2.
[b]Missing: 19.
[c]Missing: 12.

across many areas of health responsibility; the mobile video show only reached a portion of those who could benefit from them; and outside of special programs like MaNHEP, there is no vehicle for large-scale maternal and newborn health education.

DISCUSSION

The evaluation did not allow us to measure the change in knowledge levels or attitudes before and after the show, but it is clear from the results of the endline survey as well as audience members' reflections that those who attended retained the content and comprehended the intent of the show. Endline survey data identified significant differences ($P < .001$) in knowledge and beliefs about antenatal care, labor, and birth notification to health extension workers between those who were exposed to the mobile video show and those who were not. Similarly, mobile video show participants clearly indicated that the video provided resonant messages about maternal and newborn care. The show reinforced participants' existing knowledge (taught by, for example, health extension workers) and presented messages in a convincing and memorable way for those who had not been previously exposed.

Post hoc, social cognitive theory provided a framework for examining the responses of focus group participants to the mobile video show.[19] Social cognitive theory posits a structure in which self-efficacy beliefs operate in concert with goals, outcome expectations, and perceived environmental impediments and facilitators to regulate human motivation, action, health habits, and overall well-being.[20] Application of this framework guided us in interpreting attendees' responses and reactions in general categories of knowledge of appropriate health behaviors, benefits of appropriate action, self-efficacy, outcome expectations, and barriers and facilitators.

The social value of practicing appropriate behaviors was reinforced in the mobile video show and during the reflective exercises following the show. The mobile video show provided positive images of correct behavior and its social rewards. Seeing a healthy newborn in the hands of a smiling mother aimed to motivate husbands as well as all members of the family; the image embodied the rewards of a joyful family. Likewise, husbands who behaved responsibly toward their wives were recognized as well-respected members of the community.

Attendees articulated benefits of appropriate behavior in various ways. It was evident that the audience recognized the 2 scenarios presented in the show. The behavior of the 2 husbands was clearly represented in the show. In the discussions afterward, participants used the portrayals to share with others comparable examples from their own experience. These discussions typically led attendees to express their understanding of the roles that they can play as husbands and community members in preserving the health and well-being of women and newborns. The loss of the woman while giving birth had a deep impact; virtually all in attendance reflected on the importance of acting to prevent such outcomes and expressed taking action as a community good. Such behavioral intentions are a key focus of behavior change communication strategies.[21]

One of the key components of the show was helping attendees to develop their confidence and influence self-efficacy and social and group efficacy. In keeping with the overall objectives of the mobile video show, participation stimulated reflection and commitment to action. Men from the community—particular targets of the mobile video show's message—as well as *kebele* and religious leaders invoked religious teachings and personal and government responsibility as motives for correct behavior.

The mobile video show portrayed many issues that can be considered barriers to and facilitators of appropriate behavior and provided a context and format for considering ways of overcoming and strengthening these, respectively. It recognized the problems posed by unavailable or uncoordinated services and weak infrastructure, resistance from elders, limited numbers of professionals in the community, poor saving culture, and low income levels of families. Conversely, the mobile video show positively portrayed the involvement of health extension workers in home-to-home visits, availability of trained TBAs, and availability of exemplary husbands in the community. The discussions and the messages in the show raised ways of strengthening the facilitators and minimizing the barriers.

The study has a number of strengths that contribute to the credibility of the findings and their potential application. The sample was large and drawn from 2 major ethnic groups, which have different cultures. The number of focus groups conducted and the excellent rate of participation among invited participants suggest that findings can represent the reality in the target community. The focus group discussions permitted interaction between participants that contributed to the richness of the data. Finally, the involvement of focus group experts in the design of questions, training of facilitators, and analysis of data improved the quality of focus group implementation and the process of data analysis.

There are several study limitations. Focus group research, as with other forms of qualitative research, is subjective. Participant responses are open to interpretation, and some comments may be given more weight than others by researchers. We attempted to limit subjectivity by conducting as many reflections as possible and by utilizing 2 researchers to independently code and interpret reflection and focus group transcripts. Moreover, participant responses are not independent—persons can reflect, amplify, or influence others or choose not to comment because of the tenor of the conversation or because others already have commented. However, the facilitators repeatedly encouraged people to raise their issues, regardless of other people's comments. In addition, the themes included in the article are those repeatedly mentioned by the participants; thus, smaller threads may have gone unreported. The study design limited our ability to track changes brought about by the behavior change communication that might have been seen in a more longitudinal design,[8,22] but this was not feasible. The endline survey also has the same limitation of tracking the change of behavior because of the intervention; hence, only recollections of some key messages portrayed in the video were tracked.

CONCLUSION

Organizing a mobile video show is a strategy for reaching otherwise unreached individuals in a geographic area. Its nature as entertainment and its organization as a village/community event encouraged people to attend the show. As indicated by the endline survey results, these day-long presentations in *kebeles*/villages reached one-third of the districts' population. Building the video around recognizable characters (particularly the husbands) contributed to bringing about desired changes in people's knowledge and beliefs. Likewise, making the show readily available (through the mobile van) and bundling it with facilitated reflection sessions after the show had a considerable impact on people's knowledge and confidence and improved demands for the facility and community-level maternal and newborn care.

AUTHORS

Binyam Fekadu Desta, MPH, is JSI Research and Training Institute, Inc., Senior Project Manager for the Maternal and Newborn Health in Ethiopia Partnership, based in Addis Ababa, Ethiopia.

Hajira Mohammed, MSc, is JSI Research and Training Institute, Inc., Maternal and Newborn Health in Ethiopia Partnership Monitoring and Evaluation Officer, based in Addis Ababa, Ethiopia.

Kenneth Hepburn, PhD, is a Professor at the Nell Hodgson Woodruff School of Nursing at Emory University in Atlanta, Georgia.

Danika Barry, MPH, is the Maternal and Newborn Health in Ethiopia Partnership Research Project Coordinator at the Nell Hodgson Woodruff School of Nursing at Emory University in Atlanta, Georgia.

Aynalem Hailemichael Frew, RN, MPH, is JSI Research and Training Institute, Inc., Oromiya Regional Program Manager for the Maternal and Newborn Health in Ethiopia Partnership, based in Addis Ababa, Ethiopia.

Christine Claypoole, MA, was the JSI Research and Training Institute, Inc., Deputy International Division Director and Senior Advisor for the Maternal and Newborn Health in Ethiopia Partnership, based in Boston, Massachusetts.

CONFLICT OF INTEREST

The authors have no conflicts of interest to disclose.

ACKNOWLEDGMENTS

We are very much grateful to the Bill and Melinda Gates Foundation for its generous support to the Maternal and Newborn Health in Ethiopia Partnership (MaNHEP) project. In addition, had it not been for the support we received from the experts/officers working at the Health Bureaus of the Oromiya and Amhara regions and from intervention *woredas* in both regions, implementation of the mobile video show would have not been feasible. Finally, we thank the MaNHEP partners: Emory University; JSI Research & Training Institute, Inc.; University Research Co., LLC; and Addis Ababa University for their significant contributions to the implementation of the show and the generation of data included in this article.

REFERENCES

1. World Bank. *The Millennium Development Goals for Health: Rising to the Challenges*. Washington, DC: World Bank; 2004.
2. Central Statistical Agency [Ethiopia] and ORC Macro. *Ethiopia Demographic and Health Survey 2011*. Addis Ababa, Ethiopia, and Calverton, MD: Central Statistical Agency and ORC Macro; 2012.
3. Darmstadt GL, Bhutta ZA, Cousens S, Adam T, Walker N, de Bernis L. Evidence-based, cost-effective interventions: how many newborn babies can we save? *Lancet*. 2005;365(9463):977-988.
4. Bhutta ZA, Darmstadt GL, Haws RA, Yakoob MY, Lawn JE. Delivering interventions to reduce the global burden of stillbirths: improving service supply and community demand. *BMC Pregnancy Childbirth*. 2009;9(Suppl 1):S7.
5. Saunders RP, Ward D, Felton GM, Dowda M, Pate RR. Examining the link between program implementation and behavior outcomes in the lifestyle education for activity program (LEAP). *Eval Program Plann*. 2006;29(4):352-364.
6. Mullins R, Wakefield M, Broun K. Encouraging the right women to attend for cervical cancer screening: results from a targeted television campaign in Victoria, Australia. *Health Educ Res*. 2008;23(3):477-486.

7.Jordan CM, Lee PA, Olkon R, Pirie PL. Messages from moms: barriers to and facilitators of behavior change in a lead poisoning preventive education project. *J Health Commun*. 2007;12(8):771-786.
8.Kane TT, Gueye M, Speizer I, Pacque-Margolis S, Baron D. The impact of a family planning multimedia campaign in Bamako, Mali. *Stud Fam Plann*. 1998;29:309-323.
9.Marx JJ, Nedelmann M, Haertle B, Dieterich M, Eicke BM. An educational multimedia campaign has differential effects on public stroke knowledge and care-seeking behavior. *J Neurol*. 2008;255(3):378-384.
10.Sasaki S, Fujino Y, Igarashi K, Tanabe N, Muleya CM, Suzuki H. Access to a health facility and care-seeking for danger signs in children: before and after a community-based intervention in Lusaka, Zambia. *Trop Med Int Health*. 2010;15(3):312-320.
11.Moyer-Gusé E. Toward a theory of entertainment persuasion: explaining the persuasive effects of entertainment-education messages. *Commun Theory*. 2008;18(3):407-425.
12.Dunlop SM, Wakefield M, Kashima Y. Pathways to persuasion: Cognitive and experiential responses to health-promoting mass media messages. *Communication Research*. 2010;37(1):133-164.
13.Kim HS, Bigman CA, Leader AE, Lerman C, Cappella JN. Narrative health communication and behavior change: the influence of exemplars in the news on intention to quit smoking. *J Commun*. 2012;62(3):473-492.
14.Rhodes RE, Macdonald HM, McKay HA. Predicting physical activity intention and behaviour among children in a longitudinal sample. *Soc Sci Med*. 2006;62(12):3146-3156.
15.Zillmann D. Exemplification effects in the promotion of safety and health. *J Commun*. 2006;56(s1):S221-S237.
16.Ajzen I. The theory of planned behavior. *Organ Behav Hum Decis Process*. 1991;50(2):179-211.
17.Frew AH, Barry D, Mohammed H, et al. The effect of community maternal and newborn health family meetings on type of birth attendant and completeness of maternal and newborn care received during birth and the early postnatal period in rural Ethiopia. *J Midwifery Womens Health*. 2014;59:S44-S54.
18.Mitike G, Belachew A, Barry D, et al. *MaNHEP Endline Survey Report: Indicators of Knowledge, Attitudes and Practices Regarding Maternal and Newborn Health Care in Amhara and Oromiya Regions, Ethiopia.* Addis Ababa, Ethiopia: Maternal and Newborn Health in Ethiopia Partnership (MaNHEP); 2013.
19.Jordan CM, Lee PA, Olkon R, Pirie PL. Messages from moms: barriers to and facilitators of behavior change in a lead poisoning preventive education project. *J Health Commun*. 2007;12(8):771-786.
20.Bandura A. Health promotion from the perspective of social cognitive theory. *Psychol Health*. 1998;13(4):623-649.
21.Jato MN, Simbakalia C, Tarasevich JM, Awasum DN, Kihinga CN, Ngirwamungu E. The impact of multimedia family planning promotion on the contraceptive behavior of women in Tanzania. *Int Fam Plan Perspect*. 1999;25(2):60-67.
22.Kindeberg T, Christensson B. Changing Swedish students' attitudes in relation to the AIDS epidemic. *Health Educ Res*. 1994;9(2):171-181.
23.Canadian Institute of Cultural Affairs. *The Art of Focused Conversation: 100 Ways to Access Group Wisdom in the Workplace*. Toronto, Ontario, Canada: New Society Publisher; 2000.
24.UNESCO, UIS data, UNESCO institute for statistics. 2013.