



## What motivates maternal and child nutrition peer educators? Experiences of fathers and grandmothers in western Kenya



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### ABSTRACT

**Background:** Peer-led dialogue groups (i.e., support or self-help groups) are a widely used community-based strategy to improve maternal and child health and nutrition. However, the experiences and motivation of peer educators who facilitate these groups are not well documented.

**Objective:** We implemented eight father and ten grandmother peer dialogue groups in western Kenya to promote and support recommended maternal dietary and infant and young child feeding practices and sought to understand factors that influenced peer educator motivation.

**Methods:** After four months of implementation, we conducted 17 in-depth interviews with peer educators as part of a process evaluation to understand their experiences as group facilitators as well as their motivation. We analyzed the interview transcripts thematically and then organized them by level: individual, family, peer dialogue group, organization, and community.

**Results:** Father and grandmother peer educators reported being motivated by multiple factors at the individual, family, dialogue group, and community levels, including increased knowledge, improved communication with their wives or daughters-in-law, increased respect and appreciation from their families, group members' positive changes in behavior, and increased recognition within their communities. This analysis also identified several organization-level factors that contributed to peer educator motivation, including clearly articulated responsibilities for peer educators; strong and consistent supportive supervision; opportunities for social support among peer educators; and working within the existing health system structure.

**Conclusion:** Peer educator motivation affects performance and retention, which makes understanding and responding to their motivation essential for the successful implementation, sustainability, and scalability of community-based, peer-led nutrition interventions.

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### 1. Introduction

Suboptimal maternal dietary and infant and young child care and feeding practices continue to contribute to high rates of stunting, morbidity, and mortality in many low-income countries (Black et al., 2013), including Kenya (Infant & Young Child Nutrition

Project, 2011a; Kenya National Bureau of Statistics and ICF Macro, 2010). Interventions to improve nutritional status have been well documented and, depending on the intervention, can be delivered through health facilities or communities (Bhutta et al., 2013, 2008; Haines et al., 2007). Peers are potentially powerful agents in promoting improved health (Simoni et al., 2011), and peer-led support groups are a recommended community-based strategy to promote and support recommended maternal and child health and nutrition practices (Bhutta et al., 2008).

Simoni et al. (2011) use four “essential elements” to define peers: (1) they share specific characteristics, experiences, or circumstances and are selected because they are from the same

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community or belong to a specified subgroup (e.g., fathers or grandmothers); (2) their shared qualities increase the effectiveness of the services they provide; (3) they lack professional training or status in the scope of their work, but are trained to deliver a specific intervention; and (4) they function intentionally based on standardized protocols, and therefore their interactions extend beyond their existing social network.

Peers have varied roles and responsibilities. Although community, or lay, health workers are typically peers, they often have different, more expansive roles than peer educators. Depending on the context, community health workers (CHWs) can be responsible for health promotion and preventive care, community mobilization, provision of curative health care services, and assisting women during labor and childbirth (Lehmann and Sanders, 2007; Lewin et al., 2010; Perry and Crigler, 2014). In this article, we differentiate the work of dialogue group peer educators from CHWs, because in Kenya (as in many countries) their roles are quite distinct (Table 1).

Peer-led dialogue groups (i.e., support or self-help groups) have the potential to increase families' and communities' uptake of recommended maternal and child health and nutrition practices (Bhutta et al., 2013, 2008; Fabrizio et al., 2014). Facilitated discussions allow group members to actively participate in the learning process and share their experiences and knowledge with other group members (AbuSabha et al., 1999), as well as engage in group problem-solving (Affleck and Pelto, 2012). Hearing what group members know, think, and do can lead other members to positively change their attitudes and behaviors (Cordero Coma, 2014).

Peer-led women's and mothers' groups, with a trained lay facilitator, are often used to promote improved nutrition and health. A meta-analysis found that participatory women's groups, facilitated by trained lay women (or peer educators), substantially reduced neonatal and maternal mortality in rural, low-resource settings in South Asia and Malawi (Prost et al., 2013). Similar groups in Mozambique, facilitated by volunteer "mother leaders," were also associated with improved nutrition practices and outcomes (Davis et al., 2013). Finally, women's participation in peer-led support groups is strongly associated with improved infant and young child feeding and nutrition practices (Dearden et al., 2002; Pérez-Escamilla et al., 2008).

The majority of community-based infant and young child feeding behavior change interventions, including peer-led dialogue groups, typically target pregnant and postpartum women (Aubel, 2012; Infant & Young Child Nutrition Project, 2011b), even though fathers and grandmothers are well recognized for their influence on infant and young child care and feeding practices (Aboud and Singla, 2012; Aubel, 2012; Bezner Kerr et al., 2008;

Mitchell-Box and Braun, 2013; Tomlinson et al., 2014). The results from several studies emphasize the importance of expanding nutrition interventions to target influential family members, such as fathers and grandmothers (Affleck and Pelto, 2012; Israel-Ballard et al., 2014; Matovu et al., 2008; Moestue and Huttly, 2008; Ochola et al., 2013; Tomlinson et al., 2014), as they can influence mothers' behavior and provide support for the adoption of recommended practices (Affleck and Pelto, 2012). New and emerging evidence suggests that engaging fathers and grandmothers can help improve nutrition practices and health outcomes (Alive and Thrive, 2012; Aubel, 2012; Bezner Kerr et al., 2011; Mitchell-Box and Braun, 2013; Sloand and Gebrian, 2006).

Despite the widespread use of peer-led behavior change interventions for maternal and child health and nutrition, as well as other health topics (e.g., human immunodeficiency virus [HIV], tuberculosis, and malaria), there is limited information in the literature on the experiences of peer educators themselves (McCreary et al., 2013). Although peer educators' roles (Dhand, 2006; Tobias et al., 2010), knowledge (Tobias et al., 2010), and personal changes (Hilfinger Messias et al., 2009; McCreary et al., 2013; Nankunda et al., 2010) have been investigated, most studies typically focused on the peer group members' behavior. It is important, however, to also examine the motivation, training, and performance of the frontline workers who are delivering an intervention to understand intervention utilization and impact (Pelto et al., 2015; Mbuya et al., 2013; Rawat et al., 2013). The success of community-based peer-led nutrition interventions depends on peer educator performance, effectiveness, and motivation, defined by Franco et al. (2002) as "an individual's degree of willingness to exert and maintain an effort towards organizational goals." Therefore, this research sought to study the experiences and motivation of peer educators facilitating maternal and child nutrition peer dialogue groups.

## 2. Methods

The qualitative research presented here is part of a larger quasi-experimental study investigating the impact of father and grandmother peer-led dialogue groups on maternal dietary and infant and young child feeding practices in western Kenya. This study was conducted as part of a process evaluation within the primary study design (Fig. 1).

### 2.1. Overview of the primary study

The primary study evaluated the impact of a behavior change intervention, based on the socio-ecological model (McLeroy et al., 1988), which sought to engage fathers and grandmothers of

**Table 1**  
Roles and responsibilities of various community-based workers.

Community health extension worker <sup>a</sup>	Community health worker <sup>a</sup>	Dialogue group peer educator
<ul style="list-style-type: none"> <li>• Trained health worker (public health office or enrolled community nurse) employed by health system and attached to a health facility</li> <li>• Supervises a cadre of 25 CHWs in the facility's catchment area</li> <li>• Trains CHWs</li> <li>• Facilitates trainings in the community</li> <li>• Serves as link between CHWs and health facility</li> <li>• Establishes the information system and writes report</li> <li>• Treats and refers common conditions</li> <li>• Conducts home visits and growth monitoring</li> </ul>	<ul style="list-style-type: none"> <li>• Trained for nine months within a 3-year period</li> <li>• Elected during village meetings</li> <li>• Supervised by community health extension workers Provides services to 20 households within a specific catchment area</li> <li>• Provides community entry, organization, and sensitization</li> <li>• Registers, collects, and reports on household data</li> <li>• Stimulates community dialogue for change</li> <li>• Conducts health promotion activities</li> <li>• Provides referrals for services</li> <li>• Establishes support groups</li> <li>• Conducts home visits</li> <li>• Trains and supports caregivers</li> </ul>	<ul style="list-style-type: none"> <li>• Trained over five days on maternal and child nutrition, family communication, interpersonal relationships, and group facilitation</li> <li>• Elected by peer group members</li> <li>• Supported by CHW</li> <li>• Facilitates dialogue group meetings once every two weeks with 12 or fewer members</li> <li>• Attends monthly mentor meetings</li> </ul>

CHW, community health worker.

<sup>a</sup> Source: Ministry of Health (2006).

	INTERVENTION ARM 1: Father engagement Kitagwa sublocation	INTERVENTION ARM 2: Grandmother engagement Vigulu sublocation	INTERVENTION ARM 3: Comparison Mambai sublocation
<b>2011 NOV-DEC</b>	BASELINE Fathers (n=85)	BASELINE Grandmothers (n=79)	BASELINE Fathers (n=46) Grandmothers (n=86)
<b>2012 JAN</b>	Formed 8 fathers-only peer dialogue groups with 9-11 members  Each group elected one peer educator  Father peer educators trained to facilitate groups on maternal and child nutrition using discussion guide	Formed 10 grandmothers-only peer dialogue groups with 7-11 members  Each group elected one peer educator  Grandmother peer educators trained to facilitate groups on maternal and child nutrition using discussion guide	
<b>FEB-JULY</b>	Father peer educators facilitated biweekly peer dialogue group meetings, with community health worker support  All father peer educators met with community health workers, supervisors, and study team for monthly mentor meetings	Grandmother peer educators facilitated biweekly peer dialogue group meetings, with community health worker support  All grandmother peer educators met with community health workers, supervisors, and study team for monthly mentor meetings	
<i>May-June</i>	<b>Process evaluation:</b> 7 in-depth interviews with father peer educators and 8 focus group discussions with father group members	<b>Process evaluation:</b> 10 in-depth interviews with grandmother peer educators and 10 focus group discussions with grandmother group members	
<i>July</i>	ENDLINE Fathers (n=75)	ENDLINE Grandmothers (n=81)	ENDLINE Fathers (n=63) Grandmothers (n=73)

Fig. 1. Primary study timeline by intervention arm.

infants 6–9 months of age to support recommended maternal dietary and child feeding practices. Two United States Agency for International Development-funded projects collaborated with the Ministry of Health to identify three sublocations in Vihiga County in western Kenya for this study: the father-focused intervention took place in Kitagwa, the grandmother-focused intervention took place in Vigulu, and Mambai served as the comparison site. The three sublocations are similar in terms of cultural, social, economic, and livelihood systems, which was confirmed in the baseline analysis (unpublished data).

The study team collected baseline survey data for all participants. Father participants were  $32.9 \pm 8.2$  years; all were married with  $2.9 \pm 1.7$  children (25% had one child, 39% had two or three children, and 36% had four or more children); and 47% had some primary, 31% had completed primary, and 22% had completed secondary education. Grandmother participants were  $59.0 \pm 8.9$  years; with  $1 \pm 1.2$  children younger than 5 years living with them; 54% had some primary, 21% had completed primary, 7% had some secondary, and 13% had no education; and 66% were subsistence farmers, 18% worked outside the home, and 16% did not work outside the home (unpublished data).

## 2.2. Peer dialogue groups

The study team invited all fathers in Kitagwa and grandmothers in Vigulu from participating households to join maternal and child nutrition peer dialogue groups. Peer dialogue groups were chosen because they can promote dialogue, problem-solving, experience-sharing, reflection, and behavior change (AbuSabbah et al., 1999; Bingham et al., 2011), and have been used to improve maternal and child health in similar settings (Prost et al., 2013). We designed the peer-led dialogue group intervention based on formative research (Infant & Young Child Nutrition Project, 2011a) and pilot activities involving the training of HIV-positive men's support group leaders on maternal and child nutrition (Martin et al., 2010). We developed peer educator training manuals, dialogue group discussion guides, and a supportive supervisory structure that utilized several behavior change techniques (Michie et al., 2013) [Supplementary materials].

We established 8 father-only dialogue groups (with 9–11 members each) and 10 grandmother-only dialogue groups (with 7–11 members each) based on geographic proximity within the sublocations. Each group used their own criteria and elected a peer

educator (called a mentor) from among their group members without input from CHWs or the study team. In general, groups selected individuals they considered to be honest, respectable, and reliable, and excluded “drunkards,” among fathers, and “gossips,” among grandmothers.

The study team conducted a three-day training-of-trainers workshop for Ministry of Health nutrition officers. The nutrition officers then facilitated separate five-day peer educator workshops, one for fathers and one for grandmothers, using training materials developed specifically for this study [Supplementary materials]. Topics included maternal nutrition, infant and young child feeding, the role of fathers or grandmothers (as appropriate) in supporting recommended nutrition practices, improving family relationships and communication, and facilitation skills. Father peer educators also received training on facilitating group discussions to encourage reflection on gender norms.

### 2.3. Peer dialogue group meetings and mentor meetings

Peer dialogue groups met for about an hour once every two weeks close to or at the homes of the peer educators (members decided as a group when and where they would meet). Most of the fathers' groups, for example, met on Sunday afternoons, so meetings would not interfere with their employment responsibilities, making it easier for the peer educators and the group members to participate. Peer educators selected the discussion topic for each meeting based on member interest and topics in the dialogue guide [Supplementary materials]. For their participation in the study, group members received 300 Kenyan shillings (equivalent to \$3.50) at each meeting as a refreshments allowance. Peer educators also attended monthly mentor meetings to share experiences with fellow peer educators, CHWs, community health extension workers, district nutrition officers, and research coordinators.

The study team assigned one CHW to support each dialogue group. The volunteer CHWs who participated in this study were part of the official Kenyan health delivery system as level 1, or community level, service providers through the Community Health Strategy and were supervised by salaried community health extension workers (Kenya Ministry of Health (2006)). In addition to the monthly mentor meetings, CHWs attended the biweekly dialogue group meetings, provided support to the peer educators, served as a technical reference, and monitored group activities.

### 2.4. Overview of the current study

The father and grandmother peer dialogue group interventions began in February 2012. The process evaluation took place over ten days in May and June of 2012 (Fig. 1). We conducted semistructured interviews with seven of the eight father and all ten grandmother peer educators. One father peer educator moved out of the area; however, another trained peer educator facilitated this group for the remainder of the study.

The study team prepared an interview guide with open-ended questions to explore peer educators' experiences facilitating their dialogue groups [Supplementary materials]. Interview questions focused on their responsibilities, what motivated them to serve in this role, challenges they faced, successes they experienced, and their expectations for the sustainability of their groups. Trained qualitative interviewers conducted interviews with all father and grandmother peer educators in their homes in Swahili or their local language. Each interview lasted about 60 min. A trained data collector transcribed each interview and then translated the transcript into English.

Two researchers coded the interview transcripts independently based on the principles of grounded theory (Strauss and Corbin,

1990), using the qualitative data analysis software program ATLAS.ti, versions 5 and 7.1 (Scientific Software Development GmbH, Berlin, Germany). One researcher analyzed the transcripts to identify themes that broadly related to peer educator motivation. The themes were then discussed by both researchers through peer-debriefings. Any inconsistencies were deliberated until consensus was achieved. Finally, we organized our findings according to the CHW motivation framework presented by Greenspan et al. (2013).

The PATH Research Ethics Committee and Kenyatta National Hospital/University of Nairobi Ethics Review Committee approved this study. Our team of researchers obtained written consent from all participants at the start of the primary study, and obtained verbal consent from participants prior to the start of the current study (i.e., semistructured interviews).

## 3. Results

### 3.1. Perceived roles and responsibilities of peer educators

Father and grandmother peer educators listed their main responsibilities as facilitating group discussions and sharing information on recommended maternal, infant, and young child nutrition practices. Several grandmother peer educators described helping group members improve their relationships with daughters-in-law, and two father peer educators mentioned following up with group members after dialogue group meetings as part of their role. A few fathers and grandmothers considered their responsibilities to include answering group members' questions, promoting participation, and preparing the space before group meetings.

### 3.2. Motivating factors

We organized themes related to peer educator motivation by specific levels: individual, family, peer group, organization, and community (Table 2). These levels are consistent with frameworks on CHW motivation (Alam et al., 2012; Greenspan et al., 2013) and levels of behavioral influence from the socio-ecological model (McLeroy et al., 1988) upon which the intervention was based.

#### 3.2.1. Individual-level motivators

Father peer educators consistently reported being motivated by changes in their own knowledge, attitudes, and behaviors related to nutrition and gender roles. They reported doing things they would not have done before, such as chores around the house, caring for their children, and taking an ill baby to the clinic.

*“Now I feed the child after my wife has prepared food ... I help with light chores like holding the baby when my wife has gone to fetch water, or I will go to the posho [hammer] mill, shop for food, accompany my wife to clinic. I can even take the baby to clinic if my wife is too busy. I help dress the children for school and so, by the time I am leaving the house, a lot of work is already done.”*- Father peer educator

In contrast, most grandmothers reported being motivated by personal experiences of sharing information with others. Similar to the father peer educators, however, several grandmothers described being motivated by changes in their personal behaviors, particularly related to hygiene.

*“I am inspired to know that I help grandmothers support their daughters-in-law in child upbringing. I am also happy with my responsibility of teaching others and helping them improve child health.”*- Grandmother peer educator



**Table 2**  
Motivators and demotivators reported by father and grandmother peer educators.

Motivation level	Sources of father peer educator motivation (n = 7)	Sources of grandmother peer educator motivation (n = 10)
Individual	(+) Personal changes in behavior	(+) Sharing information with others
Family	(+) Improved relationships (+) Family is proud of the peer educator	(+) Personal changes in behavior (+) Improved relationships (+) Family is proud of the peer educator
Peer group	(+) Respect from members (+) Group unity (+) Members' changes (-) Members come late (-) Members come drunk (-) Members reject content	(+) Group unity (+) Respect from members (+) Members' changes (+) Active participation (-) Members come late (-) Members gossip
Organization	(+) Monthly mentor meetings (+) Community health worker support (+) Training (+) Discussion guide	(+) Monthly mentor meetings (+) Community health worker support (+) Training
Community	(+) Respect (+) Recognition of the dialogue group	(+) Recognition of the dialogue group

Note: (+) denotes motivating factors and (–) and italics denote demotivating factors. For each level, factors are listed in order of frequency.

*"I have changed. I never knew how to handle food. I would come straight from the toilet and start preparing food without washing my hands."*- Grandmother peer educator

None of the peer educators in our study mentioned being motivated by the nominal refreshments allowance they received, but one grandmother peer educator talked about appreciating being able to share the small amount with her family.

### 3.2.2. Family-level motivators

At the family level, both fathers and grandmothers reported feeling motivated by an improved relationship with their spouse or daughter-in-law.

*"I have also benefited ... I am able to help my wife in doing some work. We also work well together and do not quarrel ... Even the neighbors are wondering."*- Father peer educator

*"My daughter-in-law and I now understand each other. We no longer clash over issues of child upbringing."*- Grandmother peer educator

Fathers and grandmothers also reported that their families were proud of them for serving as peer educators, regarding them as important members of the community. This greatly motivated them.

*"My family loves me even more. They encourage me to be on time [for group meetings]. They help with household chores so that I will not be late. They are happy for me. Nowadays they call me mentor and say, 'Go, we will sweep the house for you.'"*- Grandmother peer educator.

### 3.2.3. Peer dialogue group-level motivators

At the peer dialogue group level, fathers and grandmothers frequently mentioned a sense of unity within their groups—suggesting that peer educators valued the social support provided among group members.

*"There is strong unity. We visit each other and see how our grandchildren are doing."*- Grandmother peer educator

*"My group is very active. They ask questions and bring different views. It is also a united group ... The members are intact since we started."*- Father peer educator

Peer educators reported being motivated by the respect they received from group members. They also described being motivated by observing group members in their homes, displaying positive changes in behavior and applying the lessons they had learned.

*"I have witnessed members go to the market and help their wives back at home. The wives always ask me, 'What do you teach these men? They have really changed.'"*- Father peer educator

Grandmother peer educators mentioned being motivated by the active participation of group members in their meetings.

*"Members are never willing to miss any of the teachings. They really enjoy them; especially cooking demonstrations, like uji [porridge] preparations that we did sometimes. So they do not miss. Members are always active. I have not had any problems."*- Grandmother peer educator

Some peer educators, however, reported being demotivated in specific situations. For example, some fathers reported feeling discouraged when members came late or drunk to meetings, and a few reported being demotivated when group members rejected the content. A few grandmothers reported feeling discouraged when group members arrived late or gossiped.

### 3.2.4. Organization-level motivators

In this analysis, we use the organization level to describe the supervision and support peer educators received from the CHWs, fellow peer educators, and the study team. At this level, father and grandmother peer educators reported the same two motivating factors: (1) consistent and regular support received from CHWs during their biweekly peer dialogue group meetings; and (2) the monthly mentor meetings, attended by all peer educators, CHWs, community health extension workers, and representatives from the study team, which provided the opportunity to learn from each other, exchange views, share challenges, problem-solve, ask questions, and learn new information.

*"The monthly mentor meetings are important because they help us share our experiences and hear from others. It has helped me to gain confidence. I would suggest the meetings be held more than once a month."*- Father peer educator

All but one father peer educator reported feeling satisfied with the amount and type of support they received from their assigned

CHW. Peer educators reported that CHWs answered questions the peer educators were unable to answer, reminded group members about meeting times, encouraged active participation in discussions, and helped deal with “unruly” or “difficult” cases.”

*“I always refer the hard questions to the CHW. It has not been a challenge since I have the knowledge and the CHW helps me when I am not able to answer.”*– Father peer educator

Father and grandmother peer educators reported directly supporting each other outside of the monthly mentor meetings. For example, one father peer educator described how they supported each other by “visiting each other’s groups and helping. We give new ideas to each other on how to approach any issue.”

Some father peer educators reported being motivated by the discussion guide, as it enabled them to adequately prepare for the group sessions. Most father and grandmother peer educators felt the training they received sufficiently prepared them for group facilitation; a few peer educators wanted additional training and information on HIV and infant feeding. A few father peer educators specifically wanted training on how to establish income-generating activities within their groups.

*“I feel that I have received sufficient training and facilitation skills. But if there is more training, I am willing to go.”*– Father peer educator

### 3.2.5. Community-level motivators

Father peer educators described how they personally were more respected by the community. Both fathers and grandmothers reported feeling motivated by how their group was admired by their community. Several described being viewed by their community as an authority on matters of infant and young child feeding and community members outside of their dialogue groups often approached them for guidance and advice.

*“Even children in the village now point at me and say ‘he is teaching my father.’”*– Father peer educator

*“The education and information we share with the community has made them love us. They hear us singing songs and they know the group is learning ... They see us as role models.”*– Grandmother peer educator

### 3.3. Sustainability

We explored peer educators’ plans for their groups after the study ended. All reported that they would continue to facilitate their biweekly peer dialogue group meetings and their group members would continue to participate.

*“The grandmothers are happy and will continue even without money for tea. They want education.”*– Grandmother peer educator

*“My group is firm and we will still continue even after the research. Also, the group members come from nearby, therefore it will be easy to continue.”*– Father peer educator

However, a few peer educators acknowledged that some individuals may stop participating when the refreshments allowance was no longer provided.

Eight of the grandmother groups and five of the father groups

started merry-go-round savings activities—informal group savings plans in which members contribute a small amount of money each week (e.g., \$0.50) and then take turns receiving the entire weekly collection. The peer educators from these groups reported feeling confident this would encourage members to continue their participation in the peer dialogue groups after the study was over. A few father peer educators, whose groups did not conduct merry-go-round savings activities, noted that their group would be more likely to continue if members had a shared income-generating activity (e.g., one father peer educator suggested keeping dairy cattle).

Both grandmothers and fathers asked for continued support from CHWs and occasional training updates to help their groups continue. Two father peer educators suggested allowing other members of the community (e.g., fathers with older children) to join the groups, which could help the groups to grow and continue.

## 4. Discussion

This analysis identified multiple levels of influence (i.e., individual, family, peer dialogue group, organization, and community) on father and grandmother peer educator motivation, which are similar to the levels in the socioecological model (McLeroy et al., 1988). Peer educators are embedded within social networks comprised of family members, community members, and other peer educators, which may influence their motivation (Daniels et al., 2005; Dynes et al., 2014; Greenspan et al., 2013). Franco et al. (2002) provide a conceptual framework to describe the multiple levels of influence on health worker motivation, which includes individual, organizational, cultural, community, and client determinants, and has been adopted in the CHW literature. We used this multilevel framework to explore peer educator motivation and the influence of social network forces.

Despite the limited body of literature documenting the motivation of peer educators in low-resource settings, the factors associated with the motivation of CHWs in low-income countries have been well documented (Bhattacharyya et al., 2001; Greenspan et al., 2013; Takasugi and Lee, 2012). Although the role of peer educators in this study was more narrowly defined and required less time than the roles of CHWs and community health extension workers (Table 1), several of our findings are consistent with other studies describing multilevel factors that influence CHW motivation (Alam et al., 2012; Greenspan et al., 2013), which provide a useful comparison. As our study (see Table 2) and others have shown, to ensure retention and enhance impact, it is important to design programs that address the multiple levels of motivational influence (Franco et al., 2002; Greenspan et al., 2013).

### 4.1. Individual-, family-, and community-level motivators

The altruistic desire to help people is frequently cited as a central individual motivating factor by lay health volunteers (Akintola, 2011; Kironde and Klaasen, 2002), peer counselors (Hilfinger Messias et al., 2009), and CHWs (Bhattacharyya et al., 2001; Greenspan et al., 2013). Grandmother peer educators most frequently reported being motivated by helping and sharing information with group members.

In contrast, fathers most frequently reported being motivated by the increased respect they personally received in their communities. Studies have found that increased respect is also a common motivating factor among CHWs in western Kenya (Takasugi and Lee, 2012) and sub-Saharan Africa (Brunie et al., 2014; Davis et al., 2013; Greenspan et al., 2013). Both fathers and grandmothers reported being motivated by the recognition their groups received in their communities.

Family, a key motivator for the participants in this study, is not distinctly mentioned in the framework by Franco et al. (2002), but is referred to as part of the cultural and community level of influence. Family has been recognized as an important level of influence in studies on CHW motivation (Alam et al., 2012; Greenspan et al., 2013). Some studies have found that CHWs felt demotivated when family members did not support their additional roles and responsibilities (Greenspan et al., 2013; Olang'o et al., 2010; Takasugi and Lee, 2012). However, similar to a study of CHWs in Tanzania (Greenspan et al., 2013), the father and grandmother peer educators in our study reported receiving increased support, respect, and help from family members, which motivated them. The peer educators received training on strengthening relationships and communication with family members, skills that may have led to the improved relationships and increased familial support. Both fathers and grandmothers were also motivated by changes they observed in their families and among group members, which is consistent with reports from CHWs in Uganda (Ludwick et al., 2014).

#### 4.2. Dialogue group- and organization-level motivators

Consistent, supportive supervision that results in improved performance is an important motivator for peer counselors (Nankunda et al., 2010) and CHWs (Bhattacharyya et al., 2001; Greenspan et al., 2013; Haines et al., 2007; Lehmann and Sanders, 2007; Ludwick et al., 2014; Kok et al., 2014; Puett et al., 2012). The peer educators in our study reported being motivated by the support they received from the CHWs who attended their biweekly peer dialogue group meetings, as well as the support they received from other peer educators in the monthly mentor meetings or when they would visit each other's dialogue groups. Peer support has also been found to motivate CHWs (Bhattacharyya et al., 2001; Daniels et al., 2005; Langston et al., 2014; Naimoli et al., 2012). Factors such as recruitment, training, and supportive supervision are believed to contribute to the success of peer-based community interventions; several recent reviews on the effectiveness of peer education and outreach programs have called for more detailed examination of implementation processes so that best practices can be identified and their impact on outcomes can be examined (Family Health International, 2010; Medley et al., 2009).

Although there were many similarities between our findings on peer educator motivation and previous studies with CHWs, there were also key differences. Unlike CHWs who often reported feeling overburdened by their responsibilities (Bhattacharyya et al., 2001; Greenspan et al., 2013; Olang'o et al., 2010), none of the peer educators in our study reported feeling this way. None of the father or grandmother peer educators reported expecting or hoping their role as a peer educator would turn into a paid position with our organization, which is frequently cited in studies of lay health volunteers (Akintola, 2011) and CHWs (Takasugi and Lee, 2012). (Expectation of a permanent paid position often becomes demotivating and can negatively affect retention when it does not materialize.) At the start of the study, the research team clearly articulated the roles and expectations of peer educators to the peer educators, group members, CHWs, supervising community health extension workers, and Ministry of Health staff. Peer educator responsibilities were quite specific in their scope and not time intensive (conducting biweekly dialogue group meetings close to or at their homes and attending monthly mentor meetings), which may explain this difference.

#### 4.3. Sustainability

All father and grandmother peer educators planned to continue

facilitating their dialogue groups after the study period, but a few reported that some of their group members may stop participating once the allowance was no longer provided. When reflecting on the sustainability of their individual groups, several peer educators described merry-go-round savings activities as a means to continue meeting. Some father peer educators suggested including income-generating activities may sustain the groups beyond the term of this study. Providing CHWs with opportunities for income-generating activities has been used by large-scale CHW programs (Perry and Crigler, 2014). The effectiveness and appropriateness of including savings plans or income-generating activities in peer education dialogue groups could be explored in future studies on sustainability.

Although the analysis identified several themes related to peer educator motivation, participants' responses were not unanimous across all father and grandmother peer educators, and some themes that emerged for fathers were not relevant for grandmothers and vice versa. Because roles and responsibilities are different for fathers and grandmothers (Infant & Young Child Nutrition Project, 2011a), their motivations are different as well. It is important for program planners to design peer education interventions that identify a variety of factors that motivate peer educators and recognize that a one-size-fits-all approach is unlikely to be motivating for all peer educators (Bhattacharyya et al., 2001; Cornish and Campbell, 2009) and that activities to address these multiple levels will need to be adapted for different contexts and adjusted over time (Kaufman et al., 2014).

#### 4.4. Limitations

This study is not without limitations. First, the qualitative research, which consisted of interviews with 17 peer educators from the same project in one county in western Kenya, may not be widely generalizable to peer-led groups within other contexts. Second, there is the potential for social desirability bias in participants' responses, particularly because the interviewers were considered by the participants to be affiliated with the project, even though they were not part of the day-to-day implementation team.

### 5. Conclusions and program implications

This study is an important contribution to the limited understanding of volunteer peer educator motivation in low-resource community settings. Through this analysis, we identified several factors that motivated father and grandmother peer educators to facilitate peer dialogue groups. Importantly these findings stem from the direct experiences of peer educators themselves, and are critical to consider when designing future group peer education interventions:

- Allow group members to elect their own peer educators.
- Build sound management practices into the basic intervention package and include guidelines for peer educator supportive supervision, as well as clearly articulated roles, responsibilities, and expectations, to ensure focused scope and feasible time commitment.
- Ensure targeted, supportive supervision from CHWs at peer dialogue group meetings and consistent supervision and support through monthly mentor meetings.
- Encourage experience-sharing and problem-solving among peer educators during monthly mentor meetings. This fosters new learning opportunities and provides emotional and informational support for the peer educators on an ongoing basis.
- Use government trainers and operate within existing community health system administrative structures.

- Provide peer educators with training on improving interpersonal relationships and family communication—skills they can immediately use in their homes and that will result in familial support.

Low-income countries across the globe are striving to achieve universal health coverage; yet, there is a massive shortage of trained health workers in Africa and Asia. Increasingly CHWs are filling these gaps; however, they often report feeling overburdened by heavy workloads (Kok et al., 2014; Glenton et al., 2013). Peer-led dialogue group interventions are widely used in low-resource settings; therefore, volunteer peer educators are a potential community resource, which, with the right structure and support, can effectively deliver key maternal and child nutrition messages and support in community settings. To this end, it is crucial to understand peer educators' motivation. Their impact depends on retention and performance, which are strongly influenced by motivation.

### Ethics approval

This study was approved by the PATH Research Ethics Committee and the Ethics Review Committee at Kenyatta National Hospital/University of Nairobi.

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### Appendix A. Supplementary data

Supplementary data related to this article can be found at <http://dx.doi.org/10.1016/j.socscimed.2015.08.036>.

### References

- Aboud, F.E., Singla, D.R., 2012. Challenges to changing health behaviours in developing countries: a critical overview. *Soc. Sci. Med.* 75 (4), 589–594.
- AbuSabha, R., Peacock, J., Achterberg, C., 1999. How to make nutrition education more meaningful through facilitated group discussions. *J. Am. Diet. Assoc.* 99 (1), 72–76.
- Affleck, W., Pelto, G., 2012. Caregivers' responses to an intervention to improve young child feeding behaviors in rural Bangladesh: a mixed method study of the facilitators and barriers to change. *Soc. Sci. Med.* 75 (4), 651–658.
- Akintola, O., 2011. What motivates people to volunteer? The case of volunteer AIDS caregivers in faith-based organizations in KwaZulu-Natal, South Africa. *Health Policy Plan.* 26 (1), 53–62.
- Alam, K., Tasneem, S., Oliveras, E., 2012. Performance of female volunteer community health workers in Dhaka urban slums. *Soc. Sci. Med.* 75 (3), 511–515.
- Alive, Thrive, 2012. Fathers Support Infant and Young Child Feeding: their Contributions to Better Outcomes. FHI, Washington, DC, p. 360.
- Aubel, J., 2012. The role and influence of grandmothers on child nutrition: culturally designated advisors and caregivers. *Matern. Child Nutr.* 8 (1), 19–35.
- Bezner Kerr, R., Dakishoni, L., Shumba, L., Msachi, R., Chirwa, M., 2008. "We grandmothers know plenty": breastfeeding, complementary feeding and the multifaceted role of grandmothers in Malawi. *Soc. Sci. Med.* 66 (5), 1095–1105.
- Bezner Kerr, R., Berti, P.R., Shumba, L., 2011. Effects of a participatory agriculture and nutrition education project on child growth in northern Malawi. *Public Health Nutr.* 14 (08), 1466–1472.
- Bhattacharyya, K., Winch, P., LeBan, K., Tien, M., 2001. Community Health Worker Incentives and Disincentives: How they Affect Motivation, Retention and Sustainability. US Agency for International Development Basic Support for Institutionalizing Child Survival, Arlington, VA.
- Bhutta, Z.A., Ali, S., Cousens, S., Ali, T.M., Haider, B.A., Rizvi, A., et al., 2008. Interventions to address maternal, newborn, and child survival: what difference can integrated primary health care strategies make? *Lancet* 372 (9642), 972–989.
- Bhutta, Z.A., Das, J.K., Rizvi, A., Gaffey, M.F., Walker, N., Horton, S., et al., 2013. Evidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost? *Lancet* 382 (9890), 452–477.
- Bingham, A., Drake, J.K., Goodyear, L., Gopinath, C., Kaufman, A., Bhattarai, S., 2011. The role of interpersonal communication in preventing unsafe abortion in communities: the dialogues for life project in Nepal. *J. Health Commun.* 16 (3), 245–263.
- Black, R.E., Victora, C.G., Walker, S.P., Bhutta, Z.A., Christian, P., De Onis, M., Martorell, R., 2013. Maternal and child undernutrition and overweight in low-income and middle-income countries. *Lancet* 382 (9890), 427–451.
- Brunie, A., Wamala-Mucheri, P., Otterness, C., Akol, A., Chen, M., Bufumbo, L., Weaver, M., 2014. Keeping community health workers in Uganda motivated: key challenges, facilitators, and preferred program inputs. *Glob. Health Sci. Pract.* 2 (1), 103–116.
- Cordero Coma, J., 2014. HIV prevention and marriage: peer group effects on condom use acceptability in rural Kenya. *Soc. Sci. Med.* 116, 169–177.
- Cornish, F., Campbell, C., 2009. The social conditions for successful peer education: a comparison of two HIV prevention programs run by sex workers in India and South Africa. *Am. J. Community Psychol.* 44 (1–2), 123–135.
- Daniels, K., Hendrien Van Zyl, H., Clarke, M., Dick, J., Johansson, E., 2005. Ear to the ground: listening to farm dwellers talk about the experience of becoming lay health workers. *Health Policy* 73 (1), 92–103.
- Davis, T.P., Wetzel, C., Avilan, E.H., Lopes, C.D.M., Chase, R.P., Winch, P.J., Perry, H.B., 2013. Reducing child global undernutrition at scale in Sofala Province, Mozambique, using care group volunteers to communicate health messages to mothers. *Glob. Health Sci. Pract.* 1 (1), 35–51.
- Dearden, K., Altaye, M., de Maza, I., de Oliva, M., Stone-Jimenez, M., Burkhalter, B.R., Morrow, A.L., 2002. The impact of mother-to-mother support on optimal breast-feeding: a controlled community intervention trial in peri-urban Guatemala City, Guatemala. *Rev. Panam. De. Salud Pública* 12 (3), 193–201.
- Dhand, A., 2006. The roles performed by peer educators during outreach among heroin addicts in India: ethnographic insights. *Soc. Sci. Med.* 63 (10), 2674–2685.
- Dynes, M.M., Hadley, C., Stephenson, R., Sibley, L.M., 2014. A network study exploring factors that promote or erode interaction among diverse community health workers in rural Ethiopia. *Health Policy Plan.* 1–12.
- Fabrizio, C.S., Liere, M., Pelto, G., 2014. Identifying determinants of effective complementary feeding behaviour change interventions in developing countries. *Matern. Child Nutr.* 10 (4), 575–592.
- Family Health International (FHI), 2010. Literature Review of Evidence for Effective Peer Education and Outreach Programs to Protect Sex Workers from HIV. FHI, Nairobi, Kenya.
- Franco, L.M., Bennett, S., Kanfer, R., 2002. Health sector reform and public sector health worker motivation: a conceptual framework. *Soc. Sci. Med.* 54 (8), 1255–1266.
- Glenton, C., Colvin, C.J., Carlsen, B., Swartz, A., Lewin, S., Noyes, J., Rashidian, A., 2013. Barriers and Facilitators to the Implementation of Lay Health Worker Programmes to Improve Access to Maternal and Child Health: Qualitative Evidence Synthesis. The Cochrane Library.
- Greenspan, J.A., McMahon, S.A., Chebet, J.J., Mpunga, M., Urassa, D.P., Winch, P.J., 2013. Sources of community health worker motivation: a qualitative study in Morogoro region, Tanzania. *Hum. Resour. Health* 11, 52–63.
- Haines, A., Sanders, D., Lehmann, U., Rowe, A.K., Lawn, J.E., Jan, S., et al., 2007. Achieving child survival goals: potential contribution of community health workers. *Lancet* 369 (9579), 2121–2131.
- Hilfinger Messias, D.K., Moneyham, L., Vyavaharkar, M., Murdaugh, C., Phillips, K.D., 2009. Embodied work: insider perspectives on the work of HIV/AIDS peer counselors. *Health Care Women Int.* 30 (7), 570–592.
- Infant & Young Child Nutrition Project, 2011a. Engaging grandmothers and men in infant and young child feeding and maternal nutrition: Report of a formative assessment in eastern and western Kenya. PATH, Washington, DC. Available at: <http://www.iycn.org/resource/engaging-grandmothers-and-men-in-infant-and-young-child-feeding-and-maternal-nutrition-report-of-a-formative-assessment-in-eastern-and-western-kenya/>.
- Infant & Young Child Nutrition Project, 2011b. The roles and influences of grandmothers and men: Evidence supporting a family-focused approach to optimal infant and young child nutrition. PATH, Washington, DC. Available at: <http://www.iycn.org/resource/the-roles-and-influence-of-grandmothers-and-men-evidence-supporting-a-family-focused-approach-to-optimal-infant-and-young-child-nutrition/>.
- Israel-Ballard, K., Waithaka, M., Greiner, T., 2014. Infant feeding counselling of HIV-infected women in two areas in Kenya in 2008. *Int. J. STD Aids* 25 (13), 921–928.
- Kaufman, M.R., Cornish, F., Zimmerman, R.S., Johnson, B.T., 2014. Health behavior change models for HIV prevention and AIDS care: practical recommendations for a multi-level approach. *J. Acquir. Immune Defic. Syndr.* 66, S250–S258.
- Kenya National Bureau of Statistics (KNBS) and ICF Macro, 2010. Kenya



- demographic and Health Survey 2008–2009. KNBS and ICF Macro, Calverton, MD.
- Kironde, S., Klaasen, S., 2002. What motivates lay volunteers in high burden but resource-limited tuberculosis control programmes? Perceptions from the Northern Cape Province, South Africa. *Int. J. Tuberc. Lung Dis.* 6 (2), 104–110.
- Kok, M.C., Dieleman, M., Taegtmeier, M., Broerse, J.E., Kane, S.S., Ormel, H., de Koning, K.A., 2014. Which intervention design factors influence performance of community health workers in low-and middle-income countries? A systematic review. *Health Policy Plan.* 29, 1–21.
- Langston, A., Weiss, J., Landegger, J., Pullum, T., Morrow, M., Kabadege, M., et al., 2014. Plausible role for CHW peer support groups in increasing care-seeking in an integrated community case management project in Rwanda: a mixed methods evaluation. *Glob. Health Sci. Pract.* 2 (3), 342–354.
- Lehmann, U., Sanders, D., 2007. *Community Health Workers: What Do We Know about Them? The State of the Evidence on Programmes, Activities, Costs and Impact on Health Outcomes of using Community Health Workers.* World Health Organization, Geneva.
- Lewin, S., Munabi-Babigumira, S., Glenton, C., Daniels, K., Bosch-Capblanch, X., van Wyk, B.E., et al., 2010. Lay health workers in primary and community health care for maternal and child health and the management of infectious diseases. *Cochrane Database Syst. Rev.* 3.
- Ludwick, T., Brenner, J.L., Kyomuhangi, T., Wotton, K.A., Kabakyenga, J.K., 2014. Poor retention does not have to be the rule: retention of volunteer community health workers in Uganda. *Health Policy Plan.* 29 (3), 388–395.
- Martin, S.L., Mukuria, A.G., Maero, P., 2010. Engaging men to increase support for optimal infant feeding in Western Kenya (poster). *Breastfeeding and Feminism Symposium, Greensboro, NC.* Available at: <http://www.iycn.org/resource/engaging-men-to-increase-support-for-optimal-infant-feeding-in-western-kenya/>.
- Matovu, S., Kirunda, B., Rugamba-Kabagambe, G., Tumwesigye, N., Nuwaha, F., 2008. Factors influencing adherence to exclusive breast feeding among HIV positive mothers in Kabarole district, Uganda. *East Afr. Med. J.* 85 (4), 162–170.
- Mbuya, M.N., Menon, P., Habicht, J.P., Pelto, G.H., Ruel, M.T., 2013. Maternal knowledge after nutrition behavior change communication is conditional on both health workers' knowledge and knowledge-sharing efficacy in rural Haiti. *J. Nutr.* 143 (12), 2022–2028.
- McCreary, L.L., Kaponda, C.P., Davis, K., Kalengamaliro, M., Norr, K.F., 2013. Empowering peer group leaders for HIV prevention in Malawi. *J. Nurs. Schol. arsh.* 45 (3), 288–297.
- McLeroy, K.R., Bibeau, D., Steckler, A., Glanz, K., 1988. An ecological perspective on health promotion programs. *Health Educ. Behav.* 15 (4), 351–377.
- Medley, A., Kennedy, C., O'Reilly, K., Sweat, M., 2009. Effectiveness of peer education interventions for HIV prevention in developing countries: a systematic review and meta-analysis. *AIDS Educ. Prev.* 21 (3), 181–206.
- Michie, S., Richardson, M., Johnston, M., Abraham, C., Francis, J., Hardeman, W., Wood, C.E., 2013. The behavior change technique taxonomy (v1) of 93 hierarchically clustered techniques: building an international consensus for the reporting of behavior change interventions. *Ann. Behav. Med.* 46 (1), 81–95.
- Ministry of Health (Kenya), 2006. *Taking the Kenya Essential Package for Health to the Community: a Strategy for the Delivery of Level One Services.* Ministry of Health, Nairobi.
- Mitchell-Box, K.M., Braun, K.L., 2013. Impact of male-partner-focused interventions on breastfeeding initiation, exclusivity, and continuation. *J. Hum. Lact.* 29 (4), 473–479.
- Moestue, H., Huttly, S., 2008. Adult education and child nutrition: the role of family and community. *J. Epidemiol. Community Health* 62 (2), 153–159.
- Naimoli, J., Frymus, D., Quain, E., Roseman, E., Roth, R., Boezwinkle, J., 2012. *Community and Formal Health System Support for Enhanced Community Health Worker Performance.* A US Government Evidence Summit Final Report. US Agency for International Development, Washington, DC.
- Nankunda, J., Tylleskär, T., Ndeezi, G., Semiyaga, N., Tumwine, J.K., 2010. Establishing individual peer counselling for exclusive breastfeeding in Uganda: implications for scaling-up. *Matern. Child Nutr.* 6 (1), 53–66.
- Ochola, S.A., Labadarios, D., Nduati, R.W., 2013. Impact of counselling on exclusive breast-feeding practices in a poor urban setting in Kenya: a randomized controlled trial. *Public Health Nutr.* 16 (10), 1732–1740.
- Olang'o, C.O., Nyamongo, I.K., Aagaard-Hansen, J., 2010. Staff attrition among community health workers in home-based care programmes for people living with HIV and AIDS in western Kenya. *Health Policy* 97 (2–3), 232–237.
- Pelto, G.H., Martin, S.L., Van Liere, M., Fabrizio, C.S., 2015. The scope and practice of behaviour change communication to improve infant and young child feeding in low-and middle-income countries: results of a practitioner study in international development organizations. *Matern. Child Nutr.*
- Pérez-Escamilla, R., Hromi-Fiedler, A., Vega-López, S., Bermúdez-Millán, A., Segura-Pérez, S., 2008. Impact of peer nutrition education on dietary behaviors and health outcomes among Latinos: a systematic literature review. *J. Nutr. Educ. Behav.* 40 (4), 208–225.
- Perry, H., Crigler, L. (Eds.), 2014. *Developing and Strengthening Community Health Worker Programs at Scale: a Reference Guide and Case Studies for Program Managers and Policymakers.* Maternal and Child Health Integrated Program, Washington, DC.
- Prost, A., Colbourn, T., Seward, N., Azad, K., Coomarasamy, A., Copas, A., et al., 2013. Women's groups practising participatory learning and action to improve maternal and newborn health in low-resource settings: a systematic review and meta-analysis. *Lancet* 381 (9879), 1736–1746.
- Puett, C., Coates, J., Alderman, H., Sadruddin, S., Sadler, K., 2012. Does greater workload lead to reduced quality of preventive and curative care among community health workers in Bangladesh? *Food & Nutr. Bull.* 33 (4), 273–287.
- Rawat, R., Nguyen, P.H., Ali, D., Saha, K., Alayon, S., Kim, S., et al., 2013. Learning how programs achieve their impact: embedding theory-driven process evaluation and other program learning mechanisms in alive & Thrive. *Food & Nutr. Bull.* 34 (Suppl. 2), 212S–225S.
- Simoni, J.M., Franks, J.C., Lehavot, K., Yard, S.S., 2011. Peer interventions to promote health: conceptual considerations. *Am. J. Orthopsychiatry* 81 (3), 351–359.
- Sloand, E., Gebrian, B., 2006. Fathers clubs to improve child health in rural Haiti. *Public Health Nurs.* 23 (1), 46–51.
- Strauss, A.L., Corbin, J.M., 1990. *Basics of Qualitative Research: Grounded Theory Procedures and Techniques.* Sage Publications, Newbury Park, CA.
- Takasugi, T., Lee, A., 2012. Why do community health workers volunteer? A qualitative study in Kenya. *Public Health* 126 (10), 839–845.
- Tobias, C.R., Rajabiun, S., Franks, J., Goldenkranz, S.B., Fine, D.N., Loscher-Hudson, B.S., et al., 2010. Peer knowledge and roles in supporting access to care and treatment. *J. Community Health* 35 (6), 609–617.
- Tomlinson, M., Rahman, A., Sanders, D., Maselko, J., Rotheram-Borus, M.J., 2014. Leveraging paraprofessionals and family strengths to improve coverage and penetration of nutrition and early child development services. *Ann. N. Y. Acad. Sci.* 1308 (1), 162–171.