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Barriers and Facilitators to Effective Implementation of the *NAMWEZA* Intervention in Dar es Salaam, Tanzania

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Abstract

The *NAMWEZA* intervention was implemented, using a ten-session group format, to build skills targeting psychosocial vulnerabilities and enhancing HIV prevention among people living with HIV (PLH) and their social networks. The overall goal of this intervention is to improve psychological wellbeing and reduce HIV risk behaviours. These analyses aim to describe the barriers and facilitators of implementing the *NAMWEZA* intervention from the perspective of participants and trained peer group facilitators. Twenty-four in-depth interviews were conducted with *NAMWEZA* participants, and 50 pooled peer facilitator self-assessment reports were obtained from 16 trained peers. Participants identified personal and structural barriers, including fear of inadvertent HIV status disclosure, time constraints, level of participant reimbursements, and limited space available for group sessions. Factors facilitating effective implementation included perceived benefits of the program, such as reduction in HIV-related risk behaviours, increased self-esteem, and improvement in confidence in HIV prevention communications. Scaling up the *NAMWEZA* intervention to other areas of Tanzania or regionally should take into account these facilitators and barriers to implementation.

Keywords Change agents · People living with HIV · Social network · HIV prevention · HIV transmission

Introduction

Sub-Saharan Africa has the highest regional prevalence of HIV, accounting for more than 70% of the global burden of infection (Dwyer-Lindgren et al., 2019; Jones et al., 2015; Kharsany & Karim, 2016). In Tanzania, it is estimated that 1.6 million people are living with HIV (PLH) with a prevalence rate of 4.6% among adults ages 15–49 (Avert, 2018). To address this burden, a number of intervention strategies have been put forth to influence behaviour and reduce the risk of HIV transmission (Jones et al., 2015; Owczarzak et al., 2016; Tso et al., 2016).

There is some evidence of the effectiveness of behavioural interventions for HIV prevention which have been tailored to the cultural context of specific target populations. An intervention designed to reduce sexual risk behaviours in HIV positive or sero-discordant couples in Zambia demonstrated a decrease in sexual risk behaviours and an increase in communications with partners (Chitalu et al., 2016). A randomized controlled trial assessing the impact of Stepping Stones on the incidence of HIV and HSV-2 and sexual behaviour in rural South Africa demonstrated a reduction of intimate part-

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ner violence and incidence of HSV-2, although no change was observed for HIV (Jewkes et al., 2008). The Stepping Stones intervention framework uses participatory and social learning strategies and was originally developed for use in Uganda (Welbourn, 1995), but has been adapted for use in many settings including HIV prevention interventions for adults and children living with HIV in Tanzania (Hadjipateras, 2006; Holden, 2019). A recent systematic review of HIV prevention interventions using a Stepping Stones framework demonstrated consistent improvements in HIV knowledge and improved communication skills within key relationships (Skevington et al., 2013).

The *NAMWEZA* program in Tanzania aimed to empower PLH for communication about HIV transmission risk reduction within their communities. The *NAMWEZA* program was implemented with PLH accessing HIV care and treatment services in ten structured and manualized group sessions, held once a week by trained peer facilitators. Outcomes from a randomized controlled trial demonstrated a number of positive psychosocial outcomes in PLH accessing ART services; these included reductions in HIV-related stigma and depressive symptom severity as well as increased levels of self-esteem, perceived social support, and self-efficacy. In particular, women living with HIV reported reductions in recent physical intimate partner violence (IPV) victimization by 40%, while network members demonstrated higher levels of HIV knowledge and increased utilization of HIV services (Smith Fawzi et al., 2019).

Implementation of interventions such as *NAMWEZA* might be affected by organizational factors, including staffing, space, and time, and individual characteristics, including willingness to participate, as well as facilitator knowledge, skills, and attitudes (Shifaza et al., 2014). Results of a study examining the effectiveness of a lay health worker facilitated antiretroviral medication adherence training program in South Africa demonstrated the importance of systemic (funding, government mandate, health care priorities) and contextual factors (clinic burden, space, patient volume) for successful implementation (Peltzer et al., 2012). Similar to other intervention programs, effective implementation of the *NAMWEZA* program required understanding contextual, systemic, organizational, and individual factors that can have an impact on implementation. In this qualitative study, we describe implementation barriers and facilitators of the *NAMWEZA* intervention from the perspectives of participants and trained peer facilitators.

Methods

Description of the *NAMWEZA* Intervention

NAMWEZA is a term that means "yes together we can," combining the Swahili words *naam* (yes) and *pamoja tunaweza* (together we can). The *NAMWEZA* intervention content for the 10 weekly sessions included relationships and emotions; valuing the abilities in oneself and others; considering what is working well in people's lives; assertiveness and effective communication; building relationships that are happy, healthy, and safe; and HIV status disclosure, goal setting, and future planning. A previous publication provides further details of the content of the intervention (Smith Fawzi et al., 2019). Within the Stepping Stones framework which explores socio-cultural, sexual, and psychological needs of men and women to improve communication and relationships, strengths-based strategies were also integrated from the Appreciative Inquiry Approach (Jewkes et al., 2008; Smith Fawzi et al., 2019). The Appreciative Inquiry Approach involves the art and practice of asking questions that brings out people's strengths, competencies, visions, and dreams for the future, and which skills and values they already have. These questions are carefully worded to create a joyfully focused state of mind as the participants think about and answer them. The approach also emphasizes that individuals acknowledge their abilities, focusing on positive emotions, and actions that can influence a long-term change in their lives (McAdam et al., 2011).

A number of relational skills building activities were included in each of the *NAMWEZA* content areas using role-play and smaller group discussions with 3–4 participants. Facilitators were trained to probe for stories about what was working in people's lives, bringing to light problems experienced in the past and successes in resolving them, allowing for articulation of inherent strengths/abilities that were acknowledged and validated by peers. Communication feedback strategies, such as "ability spotting," naming others' skills, and using positive language as a relational process, were used to enable participants to (re)construct new identities of which they could be proud. This could be one mechanism explaining the observed improvements in self-esteem post-intervention (Smith Fawzi et al., 2019). Using the manualized curriculum, culturally sensitive appreciative questions were carefully articulated to provide room for challenging cultural beliefs that were barriers to HIV preventive communication (McAdam et al., 2011). These appreciative approaches allowed participants to value personal ideals, as well as assets and future visions for themselves and others; this, combined with nurturing effective interpersonal communications enabled participants to build better relationships in their lives (Carter et al., 2007). Effective verbal communication was further enhanced through learning to communicate using "I" statements, which do not carry blame and allow for the other person to feel respected, loved, and appreciated. The sessions covered other relational life skills such as learning to question issues in a "circular" manner, and probing for how one might think, feel or

behave in particular situations. Learning to "dream" and reflect on a future that one wishes for, as well as "backlighting," i.e. describing how that future can be attained, were strategies used to guide goal setting and creation of future plans (McAdam et al., 2011).

The sessions were highly interactive with skills building occurring using social learning principles of learning from each other, and active learning by practicing new skills within sessions as well as at home in between sessions. Safe and pressure-free opportunities were provided to allow for feedback of the experiences from peers as well as facilitators. The psychosocial group sessions were conducted with consideration for privacy, and local age and gender norms; hence, the participants were grouped into four similar age and sex categories: older women (≥ 35 years), younger women (< 35 years), older men (≥ 40 years), and younger men (< 40 years). The sessions were also facilitated by trained peer facilitators matched by age and sex to participants, which allowed greater freedom of expression within the group and active participation. Each age and gender group comprised up to 20 participants. Each group session was held for between 3 to 4 h.

Study Population and Design

For the parent study, data were collected from November 2010 to January 2014 among participants receiving HIV care and treatment and members of their social networks in Dar es Salaam, Tanzania. A total of 458 PLH were randomized to participate in the *NAMWEZA* intervention study that was implemented as a 5-year stepped wedge randomized control trial with three steps. The *NAMWEZA* intervention was rolled out in these three steps over time. To be eligible for participation in the *NAMWEZA* program, participants had to be 18 years of age or above, receiving ART treatment for not less than three months, living in the catchment area of Kinondoni, planning to remain in the area for at least 2 years, and willingness to invite up to 10 social network members to participate in surveys (Smith Fawzi et al., 2019).

Qualitative Data Collection

Data for these analyses was drawn from session self-assessment reports prepared by the 16 facilitators and 24 *NAMWEZA* participant exit in-depth interviews. For the facilitators' session self-assessment reports, each facilitator dedicated 30 to 60 min after each session for documenting what had gone well in the session and what had not gone so well, as well as suggesting what further skills building they needed. Four peer supervisors selected by both the trained peers and endorsed by the program developers, consolidated individual self-assessment facilitator reports into one report per session from sessions held that week, and these were used to guide weekly supportive supervision groups. We include in these analyses findings from 50 self-assessment reports from 16 peer facilitators.

Participants for in-depth interviews were purposively recruited during observations of training activities in sessions one, five, and ten of the first and third steps of the intervention. Observations of implementation were made by trained research assistants at the beginning, mid-way, and at the end of each of the *NAMWEZA* sessions using a structured checklist assessing participants' level of engagement (verbal and non-verbal observations of interest in content), completion of planned content, and peer facilitators' knowledge, as well as comfort and confidence in delivering content. We sampled an equal number of study participants across age (< 35 years and ≥ 35 years) and sex (male and female) categories, with six participants for four groups: older women, younger women, older men, and younger men ($n = 24$). Participants that were actively engaged during sessions were purposively selected and invited as key informants based on their willingness to share their different perspectives and experiences in the *NAMWEZA* intervention.

A semi structured interview guide was administered to twenty-four *NAMWEZA* participants to explore their views on the content applicability and challenges of intervention implementation. This guide is available in supplemental materials. Questions were framed to reflect the following broad themes: (1) general reflections about the utility of content and skills in the *NAMWEZA* group sessions, (2) the impact of being a participant on their own lives and what changes if any others have noticed, and (3) aspects of the *NAMWEZA* group sessions that were relevant to their chosen role as change agents to promote HIV prevention messages. For each area of inquiry specific probes were made regarding perceived benefits, if any, of attending and ways in which *NAMWEZA* possibly differed from other psychosocial support groups. Furthermore, we explored perceptions about what could be done to decrease missed sessions amongst participants. The in-depth interviews were conducted in Swahili and audio-recorded with permission from participants.

Second, we included data from the facilitators' self-assessment reports. From the initial phases of the program, the project team monitored the facilitators' performance through daily documentation of self- assessment reports by facilitators. Self-assessment reports were developed after each facilitated session. Information extracted from these reports included level of participation, range of learning, areas for improvement, and verbal and non-verbal communication, as well as feedback from participants during the training sessions.

Analysis

In-depth interview narratives were analysed iteratively using NVivo 8 using a grounded theory approach (Creswell, 2017). An initial open coding process was conducted

following collection of half of the data using an iterative process, whereby new information identified was integrated and explored in subsequent interviews. The final code book and code definitions were developed collectively and three team members with qualitative analysis training coded transcripts independently to examine reliability and improve code definitions (two of the team members were master's level researchers and one was a doctoral level psychiatrist and researcher). All team members were bilingual in Kiswahili and English. The process was repeated until coding was 80% reliable, when a final coding scheme was determined. The team coded the remaining transcripts.

Self-assessment reports for facilitators were analysed using a content analysis method. The collected reports were grouped according to facilitator's age and sex categories and then coded separately from the participants' interviews. Three research teams coded, read, and extracted the reports, developing categories, and themes. A thematic analysis was conducted to explore response patterns that cross-cut interview questions and facilitators' self-assessment reports, with relevant illustrative quotations selected (Chun Tie et al., 2019).

The different methods were used based on the fact that the data collection process was different for the two groups and the data structure also varied according to in-depth interviews versus the facilitators' self-assessment tool. For the in-depth interviews, data were collected; at the same time, the analysis was ongoing. In other words, analysis of earlier interviews informed the line of questioning in future interviews, which is iterative and consistent with the grounded theory approach. This was not feasible for the facilitators' assessment tool, since these were completed before analysis began. In addition, the format of the facilitators' assessment tools was not a narrative; responses were provided to specific questions, indicating that a content analysis was more appropriate for the facilitator assessment data.

Results

Participants Characteristics

Twenty-four people living with HIV (PLH) that were trained by the peer facilitators participated in the in-depth interviews. Sixteen peer facilitators prepared self-assessment reports. Fifty percent of all participants were below the age of 35, and half were women. All participants for in-depth interviews were taking antiretroviral therapy (ART). Five themes emerged during the analysis of both in-depth interviews and self-assessment reports. Three themes were factors that facilitated effective implementation of the *NAMWEZA* intervention, namely (1) *NAMWEZA* content and learning strategies, (2) positive facilitation skills, and (3) organized training logistics. Similarly, two themes emerged as factors that impeded the delivery of the intervention: (1) fear of inadvertent HIV status disclosure and (2) challenges in training logistics.

Facilitators of Effective Implementation of *NAMWEZA* Intervention

(1) NAMWEZA Content and Learning Strategies: The *NAMWEZA* program used an appreciative strength-based approach focusing on what was already working well in people's lives, valuing and naming existing knowledge and expertise as well as acknowledging people's potential. During the sessions the participants described how self-efficacy arose through the realization of existing skills/potentials and how these could be used in different circumstances. The possibility of creating a new awareness of oneself was through the relational processes of giving appreciative feedback on each other's development and actions as summarized in the following illustrative quotations: "I liked the approach [appreciative] because it helps you recognize and understand the abilities you have which you did not know of before but through telling you story; you realize that you are blessed with certain abilities" (Participant, Older Woman).

NAMWEZA program set a context of confidentiality, trust, and group cohesion: The intervention nurtured peoples' feelings of well-being, respect and built group cohesion, allowing a safe space for sharing confidential information as evidenced by the sense of trust that participants' privacy will be respected in the group, as illustrated by the participant in the following quote: "t*he NAMWEZA program was conducted with privacy; if it was something open you would have put it that way. What we are learning from the training aimed to empower us. For instance, we get scared of a program like this because you might disclose our private issues and we become stigmatized…. but this program is run in a confidential way" (Participant, Older Man).*

Other participants felt the sessions created a sense of privacy that was a conducive learning environment by having participants grouped by gender and age, where shared experiences due to these parameters may have enhanced participants' freedom of expression within groups. An older man shared his experience in the following quote: "I loved it [NAMWEZA] because it was running under privacy and it went deep down when educating people, while other trainings are operated without considering the types of people in the group. When you have younger and older people, men and women together there are some things you won't talk [about] in front of them. You will have to use simple language but for *NAMWEZA* they categorized participants

according to age and sex so you can't feel ashamed and they speak out." (Participant, Older Man).

Use of learning strategies of role play and learning by doing: Participants described the *NAMWEZA* program as highly participatory, and that in every session, they engaged in smaller group discussions and role play with feed-back, based on an idea that everyone has skills which can grow and be developed through learning by doing. The sessions enhanced participants' familiarity with each other; relationship building fostered the experience of learning from one other as exemplified by the following quotes: "*NAMWEZA* training went hand in hand with storytelling and role plays, you tell your colleague a story (lived experiences) and she does the same, in other trainings you would find a power point presentation, questions and answers, people are not given room to share their life histories" (Participant, Older Woman).

Usefulness by being relevant to people's lives: Use of clear and shared issues arising from participants' lived experiences showed evidence of recognizing and affirming experiences which may have helped in creating a common bond amongst participants and potentially contributed to adherence to the sessions due to their relevance. "What I am happy about is openness; because even in other seminars they keep things private/concealed [mzunguko], but in NAMWEZA they talk about things openly and authentically. For instance, in the fifth session we leant about parts of the body which put someone at risk of HIV, so we drew the human body and labelled those "private parts" so, during the session you get connected and easily understand the topics" (Participant, Older Man).

(2) Positive Facilitation Skills: Participants described how they valued the role of skilled facilitators in the delivery of the *NAMWEZA* intervention as they used good communication skills, such that participants felt valued and motivated to listen to the messages being communicated. It is likely that by modelling the use of a value-based approach in communications, facilitators may have indirectly taught participant's different ways of communicating effectively. An older woman narrated and I quote: "When I consider the NAMWEZA facilitators, they have good language (good communication skills); they are friendly in such a way that it makes us eager to learn and sometimes we don't want to go back home. For instance, teacher X [would support you]; even if you are wrong, she will encourage you to do better by doing a, b, c. Therefore, having good language, valuing people will make them ready to listen to you" (Participant, Older Woman).

Participants recognized the value of the facilitators presenting a role play followed by their own practice of role play as important for building their own confidence and practical skills related to HIV prevention actions including communication of transmission prevention messages as indicated by this younger woman's report: "…but what I liked in the NAMWEZA training is that they teach you through role play as an example of what you are supposed to live and once you participate in role play it's like you are now practicing to live in that way. It teaches with practical [ways]- for example after being taught you are asked to practice it. Therefore, by so doing you continue to grow and build the confidence that "I can do it"." (Participant, Younger Woman).

On the other hand, facilitators described how they ensured inclusiveness of contributions from all participants when running sessions, which in turn motivated participants to continue attending. Facilitators used different techniques to ensure participants understood and were engaged in the sessions such as asking questions, using examples, and encouraging inactive participants to talk and share their own life experiences which group members could learn from. This is illustrated in the following statements of what was done well from the facilitators' self-evaluation reports on engaging participants: "Giving more examples before assigning group work; engaging the participants in discussions and ensuring each one contributes/responds to the questions posed…" (Facilitator, Older Men's Group).

(3) Organized Training Logistics: The peer facilitators and their supervisors had carefully thought through what would make it possible for people to come and enable them to participate. This required knowledge of the people involved to understand their life situation, i.e. to know the specific context in Tanzania. Some participants felt the program was well designed in such a way that the sessions were conducted at the specific time and day which allowed them to plan ahead and attend. Furthermore, funds provided to compensate participants' transport and time were a factor motivating session attendance as illustrated in the following quote: "For those who missed the session I may consider it was carelessness because the program was well organized between 2 pm up to 6 pm which is convenient… The session was also conducted on special days in such a way that you could plan your activities ahead knowing that on a certain day you have to be in the training" (Participant, Older Man). With regards to organization for compensation of time and transport another noted and I quote: "…. You know, our income is not good therefore some people thought 'if I miss the training where will I get food?' We did appreciate the support that's why I'm saying you planned it well because we used that amount for transport and other personal uses" (Participant, Younger Man).

Monitoring participants' attendance and quality of relationships: Facilitators reported using different strategies to ensure adherence to attending the sessions, e.g. making reminder phone calls one day before the session and using "guardian angels." The "guardian angel" was an additional support and also a retention strategy for participants, which paired participants at the end of the first session, and requested that they support each other (be a guardian angel for the other and vice versa) for the duration of the *NAMWEZA* program. The guardian angels would report to facilitators at the beginning of the sessions if his/her partner was sick or had an emergency which made him/her unable to attend the session. It was also a way to improve retention as it motivated participants to attend the next session by having someone they could consult with, on what was missed during the previous session as illustrated in the following quote: "Participants who missed the session came early, before starting time, and their 'guardian angels' updated them on what was taught in the previous session." (Facilitator, Younger Women's Group). Facilitators also provided support to the HIV Care and Treatment Center (CTC) for those who did not attend and had not communicated with their "guardian angels." "We followed up participants who missed the session by asking the Project Coordinator to take their contact information to the CTC to be tracked [active case finding]" (Facilitator, Younger Women's Group).

Quality of relationships among facilitators, sense of team work: Training logistics and team work were essential in the implementation of the program, including planning to arrive early to prepare for session, or by assigning tasks for sessions amongst themselves, since each session was facilitated by four peer facilitators unless someone was sick as illustrated by the comments below from the self-evaluations: "We [facilitators team] came early and prepared the venue including having the training tools like flip charts, and marker pens ready before starting the session" (Facilitator, Older Men's Group). Team work was also demonstrated in how they collaboratively worked together as quoted from a young female group facilitator: "Supporting each other during preparation and actual training sessions and sometimes chipping in for additional clarifications when [your team member] is facilitating" (Facilitator, Younger Women's Group).

Barriers in the Implementation of *NAMWEZA* Intervention

(1) Fear of Inadvertent HIV Status Disclosure: Disclosure of one's HIV status is one of the most important indicators of acceptance of HIV status and an important step towards taking action for preventing the spread of HIV. However, this is not so easy, as some PLH participants had experienced very bad consequences from having disclosed their status in the past. It is this context of experienced negative HIV status disclosure responses that may have been a barrier to attendance, for fear others might make assumptions about their HIV status after finding out they were attending sessions targeting PLH. The unusual nature of a health facility-initiated intervention, with implementation in nearby public primary schools may have also generated an incorrect belief in some PLH, that by attending sessions they would be exposed to the media, despite being assured about confidentiality. This is illustrated by an older woman in the following quote: "Others think by attending training they will be photographed and exposed to the media because even my husband cautioned me 'just be happy, but we might see you in the newspapers' I told him I don't care if that happens. Many are scared of being exposed to the media" (Participant, Older Woman).

(2) Challenges in Training Logistics: A number of factors that impeded the implementation of the *NAMWEZA* intervention were mentioned by both participants and facilitators and that included time management, time allocated by the program to run long sessions, reimbursement, and training venue.

Time management: Time management seemed to be an issue that arose from both facilitators and participants as some individuals did not attend sessions on time or stay until the end of the session. This informs facilitators' training for future *NAMWEZA* sessions, considering not only the content of the sessions but also managing time. Poorly timed sessions discouraged participants from attending or promoted leaving before the end of sessions. This challenge was reported by the participants permitted to be away from work by their employers as illustrated in the following quote: "Training was good but the challenge was time to start and end the sessions, because most of us were employed so instead of starting at 2 p.m., I suggest we start at 12 noon up to 4 p.m." (Participant, Younger Man).

Training reimbursement: Reimbursement was also sometimes a barrier to attending session. Some participants reported the amount designed to cater for transport and time compensation was too small compared to what they could earn if they engaged in other income-generating activities as illustrated in the following quotes: "The reimbursement was not enough compared to their daily earning as a result people opted to continue with their usual activities" (Participant, Older Man). One participant described concerns raised by others regarding the reimbursement while noting his own appreciation: "Some people complained that the amount paid

to cover transport and time was small but I appreciated being reimbursed for transport and the skills I acquired is for my own benefit and other people too" (Participant, Older Man).

Limited time allocated to run long sessions effectively: The limited time allocated to run some of the sessions was among the barriers presented by facilitators. For example, sessions that included anger management component or HIV disclosure discussions had a tendency of running out of time. This is exemplified in predominantly peer facilitator reports in the following quote: "Time is limited; for instance, the session on challenges of disclosure and supporting each other and the questions about anger and its invitation needed more time for discussion but we had to shorten it" (Facilitator, Older Men's Group). The need for additional time management training for facilitators is exemplified by the report from a young women's facilitator: "I would like the time to be increased; we only had three hours- you may think it is long time but by the time you are fully concentrated the time has ended so time was very minimal and sometimes it was two hours depending on the time people arrived. Time should be increased to four hours" (Participant, Younger Woman).

Venue challenge (small size of group session rooms): The program utilized existing resources/facilities (cost efficient rooms) which were furnished primary school classrooms. Space challenges were mostly presented by facilitators from the older aged groups (men and women) because of the larger number of participants compared to those in younger aged groups. Even when desks were pushed aside, when participants worked in smaller discussion groups, it was difficult for facilitators to walk around each group when monitoring discussions and responding to queries. Often, they did not spend as much time with each smaller group as they would have wished as noted in this report entry: "It was difficult when breaking participants into smaller groups (for activities) to monitor them because the training venue was too small" (Facilitator, Older Women's Group).

Discussion

In this study, we examined barriers and facilitators to implementation of the *NAMWEZA* intervention. Based on narrative data from in-depth interviews with study participants and facilitators' appraisal notes, three emergent themes for factors enabling successful implementation of the group sessions included (1) *NAMWEZA* content and learning strategies, (2) positive facilitation skills, and (3) training logistics. We also identified two implementation barriers: (1) fear of inadvertent HIV disclosure and (2) challenges in training logistics.

The findings from *NAMWEZA* showed that a number of approaches used in the implementation of the intervention were beneficial. Trust and confidentiality fostered by facilitators created a positive learning environment—participants felt at ease sharing their life experiences within the groups, which also facilitated session attendance. Another learning strategy was based on the appreciative inquiry approach and included encouraging participants to spot and acknowledge abilities in themselves and their peers that helped participants view others and themselves more positively. This may have enhanced their confidence in discussing different issues that affected their lives, including HIV. The *NAMWEZA* intervention constructively utilized positive group dynamics and affirmation of participants' abilities by peers, potentially building their self-esteem. Similarly, a study in South Africa that examined a structured support group intervention for pregnant women recently diagnosed with HIV found a link between increased self-esteem and confidence which was attributed to session attendance. Women who attended at least half of the sessions felt more empowered and in control of their situation (Mundell et al., 2011). It is likely that psychosocial support group interventions that foster positive group dynamics can contribute to building cohesion, trust, and confidence amongst participants.

The cohesive teamwork reported by facilitators may be due to the opportunity to be "participants" in the *NAMWEZA* intervention as part of their training. This allowed facilitators to "walk through the steps" of the intervention, which may have had a positive impact on their communication with each other as well as with participants. As they had nurtured each other, facilitators were confident enough to nurture participants' knowledge and skills, believing from their own experience with the intervention, that knowledge, skills, and commitment could actually motivate participants to become effective HIV prevention change agents, who in turn could share their experience with their network members. Our findings align with other studies in this regard. One study found that facilitators viewed themselves as compassionate and caring with the capacity to support the participants in mastering the intervention, despite reportedly being underpaid and overwhelmed with clinic routines (McCreary et al., 2010). In contrast to these findings, a study of fidelity and implementation of an HIV/AIDS and sexually transmitted infections intervention among rural African Americans found that facilitators were less prepared and unfamiliar with the lessons, which impeded group facilitation and youth outcomes. Thus, they failed to encourage youth participation as some were slow to respond and inactive during the session, which impeded the facilitation process (Albritton et al., 2014).

Participants in the present study reported that training logistics were an important factor for successful implementation of the intervention. Facilitators used different strategies to monitor participants' adherence to the session. These included having participants' phone contacts with two alternative contact numbers, checking

attendance, pairing participants at the preparatory session so each became the other's "guardian angel," and providing a half hour summary prior to the subsequent session for those who missed a session. This may have been a key factor in participant retention by motivating participants to attend the session by catching them up on what was discussed in the previous session. There is evidence that using mobile phones either by making calls or sending text message reminders not only encouraged participants to arrive promptly to the sessions but also improved adherence to HIV care and treatment services (Albritton et al., 2014; Gurol-Urganci et al., 2013; Schwebel & Larimer, 2018).

Despite the predominantly positive reactions of participant informants regarding their experiences in the *NAMWEZA* sessions, some barriers to participation were also reported. It was challenging for some participants to attend the sessions regularly because of fear of inadvertent disclosure of their HIV status to their partners through attending *NAMWEZA* sessions. The issue of trust was also important although the majority found it safe to attend sessions, some participants could not trust the program implementers even when they were assured that their confidentiality would be protected. The analysis showed that participants were concerned about inadvertent disclosure in the event that they would meet familiar people during their attendance at the sessions. In addition, they were concerned that the frequency of attendance (weekly) would raise suspicion in partners that they had not yet shared their HIV serostatus with. There was also fear that the group sessions held in the afternoons in a close-by primary school would attract media attention and publicity; participants with these fears generally did not attend the *NAMWEZA* group sessions. For this participant's inadvertent disclosure to partners risked stigmatizing responses, including the possible breakdown of their relationship. There is a need for disclosure awareness/education to be strengthened in CTCs to improve clients' self-esteem and their participation in HIV prevention programs. Recent studies also report that fear of stigma, lack of trust in HIV care, and treatment services and other health services, including HIV testing, were among factors which hindered the delivery of interventions (Evans et al., 2016; Hall et al., 2017; Wolf, 2014).

Similar to research in other settings with limited resources, the level of reimbursement for time and transport can influence attendance and retention rates. This is in line with findings from the *NAMWEZA* study where some participants thought the reimbursement offered was not sufficient and therefore missed some sessions or opted not to attend. However, the results did not show the proportion of participants who missed the session because of insufficient reimbursement. Similarly, findings from two studies reported that reduced reimbursement negatively affected the accrual rate, retention and participants' morale (Chitalu et al., 2016; Mngadi et al., 2015).

Our findings showed that the training venue infrastructure posed a challenge during implementation. However, this is common in low-income settings where it is difficult to have a specific room size adequate for group-based interventions (Wolf, 2014). The number of older women participating in the sessions was relatively high compared to the other age and gender groups, resulting in sessions that were more crowded compared to the other sub-groups. In addition, the quality of the intervention was also affected by the limited time allocated to run long sessions, with some participants arriving late and others leaving early. Similar to the findings from this study, time constraints also posed a challenge for running group sessions (Albritton et al., 2014; Sarma & Oliveras, 2013).

There are a number of limitations of the present study. In-depth interview participants were selected during observations from actively engaged participants. Using this selection strategy may have selected participants with a higher level of satisfaction with the intervention and may have not included those who perhaps missed sessions or were less engaged during sessions, and may have been less positive about the intervention. Furthermore, since people were reporting in face-to-face interviews on their feedback about an intervention, there is a possibility of social desirability bias, whereby people may over-emphasize their positive responses and refrain from sharing negative comments. In addition, the use of self-assessment reports from the peer facilitators may have limited the depth of the content, since the data were not generated from a targeted set of questions that would typically be part of an in-depth interview. Despite these limitations, the findings do provide information on areas for strengthening the *NAMWEZA* program in the future.

Conclusion

The current qualitative study indicates the *NAMWEZA* program conferred positive impact on the participants in regard to self-efficacy, self-esteem, improved knowledge on HIV prevention, and enhanced communication and the quality of their relationships. A critical barrier was participant concerns about inadvertent disclosure of HIV by participation in the program. Strategies are needed to address HIV related stigma in order to facilitate recruitment and attendance in future programs with people living with HIV. In addition, it is important to consider allocation of sufficient and appropriate time and resources to conduct group psychosocial support sessions for PLH and address logistical issues such as the venue and reimbursement. Current findings may inform scale up of the *NAMWEZA* intervention to other parts of the country

and similar settings to optimize primary program outcomes, including reduction of HIV transmission and gender-based concerns in HIV-related communications.

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Author Contribution MS designed the study, explored the literature, interpreted the findings and manuscript writing; SK, HS participated in study design, interpreted the findings and manuscript writing; DA managed field works and interpreted findings; KO, EM, KM, and JT assisted in designing the study and interpreted the findings; IA, AS assisted in guiding the project activities in the field; SM, NM collected data in the field; SH advised on the design and interpreted the findings; MSF guided the design, data management, and final manuscript writing. All authors have contributed to and approved the final version of the manuscript.

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Data Availability and Code Availability Data are available upon request to skaaya@gmail.com or mksfawzi@msn.com.

Declarations

Ethics Approval According to the principles of 1964 Declaration of Helsinki, this study was approved by the National Institute for Medical Research (NIMR), Muhimbili University of Health and Allied Sciences (MUHAS) in Tanzania, and the Institutional Review Board (IRB) at the Harvard T.H. Chan School of Public Health (HSPH).

Consent to Participate Written informed consent was obtained from all individual participants enrolled in the study.

Conflict of Interest The authors declare no competing interests.

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