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Understanding Men's Networks and Perceptions of Leadership to Promote HIV Testing and Treatment in Agincourt, South Africa

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Abstract

Understanding informal leadership in high HIV prevalence settings is important for the success of popular opinion leader (POL) and other testing and treatment promotion strategies which aim to leverage the influence of these leaders. We conducted a study in Mpumalanga province, South Africa, in which we aimed to: 1) Describe men's personal networks and key social relationships; and 2) describe the types of individuals men identify as leaders. We administered a structured questionnaire with 45 men (15 HIV-positive and 30 HIV-negative) in which men enumerated and described characteristics of individuals they share personal matters with, and people they considered as leaders. We further conducted in-depth interviews with 25 of these men to better understand men's conceptualization of leadership in their community. Family members were prominent in men's personal networks and among the leaders they nominated. Men living with HIV were much more likely to know others living with HIV, and described friendships on the basis of the shared experience of HIV treatment. Future POL interventions aiming to promote HIV testing and care among men in rural South Africa should consider the importance of family in community leadership, and seek to leverage the influence of connections between men living with HIV.

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Keywords

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INTRODUCTION

Strategies are needed to more effectively promote HIV testing, as well as linkage to and retention in care and treatment among individuals living with HIV. The salience of such strategies has increased as evidence has grown for the preventive benefit of commencing HIV treatment early (Cohen et al., 2011). Understanding how to promote these behaviors is particularly important among men, as globally men are significantly underrepresented in HIV testing and treatment services (Cornell, McIntyre, & Myer, 2011). In South Africa, nearly two-thirds of HIV infected men are unaware of their status, compared with less than half of HIV infected women (Shisana, O, Rehle, T, Simbayi LC, Zuma, K, Jooste, S, Zungu N, Labadarios, D, Onoya, D et al., 2014). Men in South Africa are also less likely to seek, use, and adhere to antiretroviral therapy (ART) than women (Cornell, Myer, Kaplan, Bekker, & Wood, 2009; Stringer et al., 2006), and have a greater mortality rate while on ART (Taylor-Smith, Tweya, Harries, Schoutene, & Jahn, 2010). Furthermore, men play an important role in sexual and reproductive health decision-making, thus greater engagement by men is likely to impact HIV testing uptake more broadly at the community level (Dudgeon & Inhorn, 2004).

To increase men's uptake of HIV testing and treatment services, we need a clearer understanding of the social dynamics that shape decision-making around engaging in these services. Gender norms that promote men as strong, invulnerable to sickness, and self-reliant when faced with illness are major barriers to men's utilization of health services (Fitzgerald, Collumbien, & Hosegood, 2010; Izugbara, Undie, Mudege, & Ezeh, 2009; Skovdal et al., 2011). These normative influences on men's behaviors are compounded in communities where HIV stigma is still present. This stigma works to drive the epidemic underground, making people unwilling to learn their status, disclose their status, and seek services related to HIV (Mall, Middelkoop, Mark, Wood, & Bekker, 2013; Meiberg, Bos, Onya, & Schaalma, 2008; Pettifor, MacPhail, Suchindran, & Delany-Moretlwe, 2010). Men are influenced in their use of health services by what they think their peers are also doing, and are particularly influenced by male peers (Hampanda, Ybarra, & Bull, 2014; Muhamadi, Ibrahim, Wabwire-Mangen, Peterson, & Reynolds, 2014; Ssekubugu et al., 2013).

In the effort to shape these important normative influences to promote HIV testing and treatment, interventions incorporating popular opinion leaders (POL) serve as useful tools for behavior change at the community level. POL interventions have been used effectively in HIV prevention programs (Jones et al., 2008; Kelly et al., 1997; Sikkema et al., 2000), and community mobilization (CM) interventions which include the use of POL have significant potential to improve men's testing uptake and linkage to and retention in care, by addressing the social barriers that deter men from accessing HIV testing and treatment services such as HIV stigma, lack of social support, and masculine gender norms (Govindasamy, Ford, & Kranzer, 2012; Kabore et al., 2010). CM has been used to successfully change HIV risk

behaviors and to challenge inequitable gender norms in a range of settings (Cornish, Priego-Hernandez, Campbell, Mburu, & McLean, 2014; Reza-Paul et al., 2008).

Grounded in social diffusion theory (Rogers, 2010), the POL approach aims to engage opinion leaders who are community members who have the position and influence to affect the attitudes, beliefs, and behaviors of others (Valente & Pumpuang, 2007). This potential to influence their peers' attitudes and behaviors is shaped by the opinion leaders' values and traits, their competence and expertise in affecting the desired behavior or attitude change, and their social position within the community (Katz, 1957). Practically, POL help to build partnerships with intervention communities, communicate behavior change messages, and serve as models for behavior change (Valente & Pumpuang, 2007).

Despite the importance of engaging POL in community behavior change programs, there is little consensus as to the best method to identify these leaders, and methods vary from self-selection, to peer-nomination, to sociometric identification (Valente & Pumpuang, 2007). Often intervention agents identify POL with the help of key informants and community member nominations. Rather than relying on official leadership or self-nomination, this approach can help to identify individuals who are perceived as leaders by their peers (Valente & Pumpuang, 2007). As this method of POL identification produces comparable results to sociometric identification and is much less cost- and time-intensive (Valente & Pumpuang, 2007), it is a desirable approach when the ultimate goal is to intervene in multiple communities or to ultimately scale up the POL intervention.

To empower intervention teams to identify effective POL among men living in rural South Africa, we need a better understanding of the types of individuals who men in this setting perceive as leaders, and the qualities that make an effective informal opinion leader. To promote HIV treatment and retention in care specifically, we need to understand the nature of informal leadership among men living with HIV in this setting. This is no easy task, as there are many examples of programs that failed to adequately gain the support of leaders, and as a result either never got off the ground or were not sustained (Pluye, Potvin, & Denis, 2004). Understanding who men consider as their informal network leaders will be critical to future enhanced leadership activities. To better understand the nature of men's social networks and informal leadership within them, we sought to describe men's networks and key social relationships in rural Mpumalanga province, South Africa, and to describe the qualities of individuals who men identify as leaders. With this information, we hope to better understand how to effectively engage POL in men's networks to promote testing and linkage to and retention in HIV care.

METHODS

Study background and setting

This study took place at the South African Medical Research Council and the University of Witwatersrand's Agincourt Health and Socio-Demographic Surveillance (HDSS) site in the rural Agincourt sub-district of Mpumalanga province, South Africa (Kahn et al., 2012). The study site is located approximately 500 km northeast of Johannesburg, near South Africa's border with Mozambique. The HIV prevalence in Mpumalanga is estimated to be 22%

among adults ages 15–49 (Shisana, O, Rehle, T, Simbayi LC, Zuma, K, Jooste, S, Zungu N, Labadarios, D, Onoya, D et al., 2014). By the time men reach the age of 35–39 years, 45% are infected, and the prevalence remains above 15% even into the 70 year and older age group (Gomez-Olive et al., 2013; Kahn et al., 2012).

The research team has been conducting a number of studies at the site, including a community mobilization intervention that took place from 2012–2014 focused on changing inequitable gender norms and HIV-related behaviors among young men (R01MH087118; Pettifor) (Pettifor et al., 2015). It was during this study that the team recognized a difficulty in identifying community leaders to effectively partner with in community programming. As a result, prior to initiating a new community mobilization trial focusing on promoting uptake of HIV testing and treatment (ongoing; R01MH103198; Lippman/Pettifor; *Activating Treatment as Prevention through Community Mobilization in South Africa*), the formative data presented here were collected to better understand men’s networks and informal leadership in the study communities.

Recruitment and data collection

A total of 45 men were purposively selected based upon their HIV status from 14 villages in the HDSS catchment area. 30 HIV-negative men were identified by intervention agents from the aforementioned CM trial. 15 HIV-positive men (10 engaged in care, 5 not currently engaged in care) were identified through two local clinics. Both HIV-negative and HIV-positive men were interviewed as we were interested in understanding personal networks and leadership broadly within the study communities. Nurses pre-contacted these men to gauge interest in participating and contact information was provided to the study team for consenting clinic patients. Structured questionnaires were completed with all 45 men and in-depth interviews were conducted with all HIV-positive participants and 10 HIV-negative participants (25 total IDI participants) following completion of the structured questionnaire. These groups were chosen to understand variation in men’s social relationships and views about informal leadership by HIV status.

In the structured questionnaire, men were asked to list personal confidantes defined as individuals they would be willing to discuss personal matters with, and informal leaders or role models, defined as individuals whom they admire. For each person named as a confidante or leader we asked respondents to report the person’s kin relationship (if any), the person’s gender, how long they had known the person, whether the person lived in their household or village, how close they felt to this person, and whether they had ever discussed personal matters related to HIV/AIDS with the person.

After completing the structured questionnaire, the semi-structured in-depth interview began. Interviewers were able to refer to people named by the participant in the questionnaire portion of the interview. The aim of the in-depth interviews was to understand: 1) who men spend time with on a regular basis; 2) where they meet with friends and family; 3) what they do with friends and family when they socialize; and 4) the qualities that men talk about in reference to individuals they perceive as leaders among their friends and family. An interview guide based upon these topics was provided to interviewers who were trained on the aims of the research and the use of the interview guide. Native xiTsonga-speaking,

experienced qualitative interviewers from Agincourt conducted the interviews, and also transcribed and translated the audio-recorded interviews into English.

Data analysis

Data resulting from the structured questionnaire were summarized descriptively using frequency and means tables in SAS v 9.4. We described the size and composition (sex, age, number of family and friends) of men's personal networks. We also described the characteristics (sex, age, status as a family member or friend) of leaders nominated by participants. For both personal network members and leaders, we looked at differences in each descriptive frequency and proportion by HIV-status. Due to the sample size we did not aim to test the significance of differences by HIV-status and thus performed no formal hypothesis tests.

Analysis of the in-depth qualitative interviews began with reading the transcripts in full and writing a brief summary for each interview. These summaries focused on descriptions of men's relationships and ideas about leadership. Transcripts were then coded in Atlas.ti version 7 using topical codes based on interview guide questions. Matrices were created to summarize information across interviews and make comparisons between HIV-positive and HIV-negative men. In these matrices for each interview we summarized the activities men engage in with friends and family, how often and where they see these friends and family, how they had met the friends they mentioned, qualities men attributed to people who they stated they thought of as a leader, and (for HIV-positive men) how their relationships had changed since disclosing their HIV status to friends and family. Findings related to each topic were summarized and illustrative quotes were chosen for each point.

Ethical Review

The study was approved by the ethical review committees at the University of North Carolina at Chapel Hill, the University of California San Francisco, and the University of the Witwatersrand in Johannesburg, South Africa. Individual written informed consent was obtained from all study participants.

RESULTS

The 45 interview participants were on average 30 years old. Of these 45, the 25 men who participated in in-depth interviews were slightly older than the group as a whole (on average 35 years old). Of the 15 HIV-positive participants, 10 were actively engaged in HIV care while five were not. Nearly two-thirds of participants were married, and over three-quarters had attended high school.

Size and composition of personal networks

In response to the structured questionnaire, participants listed many more family members than friends when asked about people with whom they shared personal matters. Most participants' personal networks included about 7 or 8 people. Participants named between 2 and 9 family members, most commonly naming 4 family members (median response made by 9 participants). In contrast, men only nominated between 0 and 5 friends, with most

naming between 1 and 3 friends (19 participants; median = 2 friends). In the in-depth interviews participants described spending most of their time at home with family and friends who visit them, or at others' homes in the village. Men reported seeing family members and friends who lived in the same village on a daily or near-daily basis.

Relationships with network family members

The most common types of family members named in the structured questionnaire were siblings (38%) followed by aunts or uncles (18%) and parents (17%). When asked how often they see these family members in the in-depth interview, this often depended on whether that family member was away from the village much of the time working. For family members living in the same village, the participant may see them every day or a number of times a week. On the other hand, family members living far away may only come home every few months, or just a few times on major holidays like Easter and Christmas. Many men were very close with and often lived with their mothers. About 6 or 7 men specifically mentioned that they saw their mother every day and spent a lot of time together. HIV-positive men also often expressed gratitude to their mothers who had supported them since their diagnosis:

‘The person who helped me that I admire the most, more than everyone I listed... is my mom... if it was not for her, when I started treatment I would have died. So she is the one who I admire the most because she made me to be a man today. She was pushing me in a wheelbarrow when I was unable to work, you see.’

– 36-year-old HIV-positive man engaged in care

In the in-depth interviews, when asked what kinds of things they do when they spend time with family, men most commonly responded that they ‘sit and chat’ with relatives. Sometimes participants specified what was often talked about, such as ‘life, challenges, bad and good things.’ A few participants differentiated between family members with whom they talk about ‘general things,’ versus certain family members they discuss ‘serious’ or ‘important’ matters with. For example, one man explained that he sits with his father every morning and discusses family issues with him. For some men living with HIV, more serious matters included talking about their treatment and how to stay healthy. Aside from just ‘chatting’ a few participants mentioned watching TV and a few others described working in the yard or garden together.

Relationships with network friends

Most participants said they had met their friends in a few different places, mainly at school, ‘around the village,’ or at work. A few participants described having known a friend since childhood. One participant had met all three of his friends at work in a nearby large town. As he was no longer employed in that town it was difficult for him to see these friends often. Another participant had met most of his friends at church, and one mentioned initially meeting a friend at a drinking venue, or *shebeen* (drinking venue).

When asked how often they see these friends, most participants described seeing one or more friends ‘every day,’ ‘all the time,’ or almost every day. Many participants also had at least one friend who now lived away from home and who they would only see when that friend could come home on leave every few months or so. One participant who himself lived

far from his home lamented the fact that he now sees his friends infrequently: *'I can say now I am unable to see them, even two months can pass without seeing them,'* (36-year-old HIV-positive man engaged in care).

When asked what kinds of things they do when they spend time with friends, a majority said they meet at each other's homes. In that setting, most men described 'talking about life' or 'advising each other,' while a few mentioned watching television. Others talked more broadly about meeting around the village. Often secondary places to meet included a *shebeen* or a soccer field. Some also mentioned meeting at church. A few participants also mentioned staying in touch with friends via cell phones, and one mentioned using *Whatsapp* (a social media application) – this was true for the man who no longer worked with his friends who he had met while working in a nearby town, as it was for a young man communicating with his friends in his same village while at their respective homes: *'We call each other or Whatsapp, asking what are you doing,'* (22-year-old HIV-negative man).

Network relationships: Differences by HIV status

In response to the structured questionnaire, HIV-positive and -negative men reported personal networks of about the same size (about 7–8 people). HIV-positive men typically named about two friends or family members known to be living with HIV, whereas all 30 HIV-negative participants named only three known HIV-positive friends and family members in total. Beyond the frequency of known HIV-positive network members, there were no clear differences in the composition of men's networks by HIV status. During the in-depth interview, HIV-positive participants were asked if living with HIV had affected their relationships. None of the 15 HIV-positive men said that there had been a change. A typical response was: *'No, our relationships didn't change, and I have never seen a sign to show that they don't like me because I'm HIV-positive,'* (49-year-old HIV-positive man engaged in care). One man said his relationships had actually improved. Similarly, when asked *'Are your closest friends still the same as they were before you knew you had HIV?'* all said 'yes.' However, when asked *'Do you have a new group of friends built around being HIV positive?'* three men of the 15 responded that they did. One man gave a specific example of the nature of this new friend group:

'We meet at the clinic when we are there to collect treatment, and we encourage each other to take treatment because it's our life. We ended up being friends since we are all positive and we are from different villages. We also buy cold drinks and then we drink together.'

– 49-year-old HIV-positive man engaged in care

Characteristics of perceived leaders

In the structured questionnaire men were asked to name people in their lives who they considered to be leaders. Over all participants, about two-thirds of the leaders they named were family members, and about one quarter were friends. One third of people nominated as leaders were women. Nearly all of the women nominated as leaders were a family member of the participant in contrast to only about half of male nominated leaders. The age of people nominated as leaders ranged from 18 to 85 (as reported by participants), and on the whole

were relatively young; nearly two-thirds of people nominated were under the age of 40. Furthermore, there were very few older adults named as leaders; only 11 of the 149 nominated leaders were over the age of 60.

During the in-depth interview men were asked to explain why they had nominated the individuals they named as leaders. Every single participant was able to speak extensively without prompting about why exactly he chose particular individuals as leaders. Further, participants spoke on this topic with a great level of certainty and little ambivalence about the individuals they had chosen as leaders. While the kinds of leadership characteristics each participant identified differed by the individual they were talking about, the overarching theme for nearly all revolved around good character, primarily demonstrated by showing care towards others in the community, often towards the participant himself. This often included advising the participant well and providing acts of service:

‘His behavior is an example to other people. He will encourage you to do good things and protect you from doing stupid things. He has his own family but he doesn’t forget that he has his mom at home, buys groceries for his aunts. Everyone respects him...’

– 38-year-old HIV-positive man engaged in care

For all participants, leadership characteristics rarely included positions in the family or society, or having financial means. Even when such characteristics were mentioned proactively by the interviewer (e.g. asking if the participant thought a policeman in the community, a social worker, or a businessman was a leader), participants perceived this designation of status as only reflection of the good quality of the person’s character. One participant did nominate a policeman as a leader but added: *‘He is always straight and to the point. And he is a humble person and is a good example in our family and is very good at making decisions,’* (42-year-old HIV-positive man engaged in care). In fact, often when the interviewer followed up on a participant’s proactive description of leadership qualities with a series of probes that included ‘position in the family’ or ‘being employed,’ the participant would specifically say he did not choose the person for those reasons. Rather, men accepted other proposed characteristics such as ‘exemplary behavior’ and ‘someone people can confide in’ as something that made the individual a leader.

Though financial standing did not factor into participants’ definitions of leadership, the ability and willingness to support others financially did. For example, one man nominated as a leader an individual who had ‘succeeded in life’ (i.e. has a well-paying job) and helped assist others financially to further their studies, a sign of his ability to inspire others. Other participants further focused on ‘being a provider in the family’ as qualities of the leaders they nominated. For HIV-positive men specifically, over one-third focused on the care and assistance a person had provided them personally when they found out they were HIV-positive, often including financial support. One HIV-positive man identified his mother as a leader because: *‘...now I’m ill and not working but she’s able to provide me with food and is taking care of me,’* (45-year-old HIV-positive man not engaged in care). He also identified his uncle who had also *‘provided me with everything since I have been unwell.’* Another participant living with HIV described how someone who he thought of as a leader had

helped his brother who was also HIV-positive: *'I remember my brother was ill and he was the only person who supported me and also provided his car to take him [my brother] to the hospital or for checkups,'* (41-year-old HIV-positive man not engaged in care). As seen in these examples, financial support as a leadership characteristic was rarely cited in isolation of other types of social support, and may have been seen by participants as a further expression of caring on the part of the nominated leader.

We further asked men to discuss leaders in the community in the fight against HIV/AIDS, with regard to HIV prevention and support of people living with HIV in the community. Notably, no participant mentioned a formally elected or traditional leader in response to this question. Though a few men mentioned clinic nurses, men again most commonly mentioned people who had demonstrated particular care and concern either for the participant personally or for others in the community in relation to HIV prevention and treatment. Among HIV-positive participants, about half (7 of the 15) did not think there was currently anyone who was a leader in the fight against HIV in their community, and most of these individuals couldn't identify anyone who could potentially fill this role in the future.

DISCUSSION

Our results show that family plays a significant role in men's personal networks in this setting, and that confidence and caring are important to trust in extra-familial relationships and men's ideas of leadership. Moreover, men rarely discussed official community leadership and socio-economic standing as important characteristic of leaders they mentioned, indicating the appropriateness of POL interventions in this setting. This points to the importance of identifying POL among HIV-positive men's networks to encourage treatment uptake and retention. We discuss each of these key findings in further detail below.

The relatively small size of personal networks and family-centered nature of men's descriptions of their personal networks may be better understood in the context of family life and relationships in the study area, which is characterized by high levels of permanent and temporary out-migration. Apartheid policies disrupted livelihoods and led to the still prevalent labor migration system in South Africa (Collinson, 2010). Today, unemployment in the study area is high, with an estimated unemployment rate of 29% for men and 46% for women (Collinson, 2010), contributing to frequent temporary labor migration; approximately 62% of households in the study area had at least one household member absent in 2007 because of temporary migration (Hunter et al., 2014). As many men and women of working age do not permanently live in their home villages, it may be difficult for men of working age who are permanent residents to maintain contact with their peers. Despite the high levels of migration in the study area, family relationships are still strong and multigenerational cohabitation may be increasing (Wittenberg & Collinson, 2007). Extended family members also tend to live close to one another and share food and childcare responsibilities (Madhavan, Mee, & Collinson, 2014). Taken together, the mobility of the working-age population and the continued importance of family in living arrangements may help to explain the small and family-centered networks described by men in this study. Because of the importance of family, it follows that understanding family connections and

harnessing informal leadership within family networks will be important to the success of POL interventions in this setting.

Our findings further indicate that the people who men perceive as leaders are friends and family who have been supportive toward them, though more family members than friends were nominated as leaders. Further, about a third of the people men nominated as leaders were women, though almost exclusively female family members rather than friends. Together these findings indicate that kinship is important in thinking about informal leadership in this setting, and that women should not be discounted as leaders in promoting HIV testing and treatment among men, especially when these women are family members of men at risk for or living with HIV. It is also important to note that these men made little mention of official leaders. Notably, unlike findings from other African contexts which indicate that men's networks are organized hierarchically by economic status such that perceived leaders tend to be those with the most income or resources (Ragnarsson, Townsend, Thorson, Chopra, & Ekström, 2009), participants in this study named people who they believed had good character and behavior, and showed caring for others. Understanding that expressions of caring and social support are high among the characteristics of individuals that men look to as leaders in this context, future POL interventions could try to identify individuals who exhibit these characteristics, or train peer leaders to build this type of supportive relationship with community members, or both. Understanding and utilizing definitions of leadership from the personal perspective of community members rather than engaging formal community leaders will allow us to adopt a more nuanced approach which is more compatible with the POL model of intervention and may contribute to the success of programs to engage men in HIV testing and care.

Finally, we found that HIV-positive men were much more likely to have family and friends known to be living with HIV in their network than HIV-negative men. Men living with HIV did not find that their relationships and networks had changed as a result of their HIV status. Rather, many of them found that disclosing their status to family and close friends had strengthened existing supportive relationships. This said, people may be more inclined to disclose to family members and partners with whom they already have supportive relationships and from whom they would anticipate positive reactions and support upon disclosure of their HIV status (Maman, Groves, McNaughton Reyes, & Moodley, 2016). HIV-positive participants described forming friendships based upon clinic visits and mutual support with other people living with HIV. In the effort to understand influential relationships among men living with HIV and leadership within these networks, it will be important to consider that shared HIV-status may be an important factor in relationship building. Rather than assuming that men living with HIV have weakened relationships after disclosing their status, interventionists should consider the possibility that positive men may not only have strong relationships with close family and friends, but that they may also have new important relationships with other men and women living with HIV. POL interventions should consider the behavioral salience of each of the multiplex networks that men belong to. For treatment adherence and engagement in care, relationship networks among people living with HIV may be just as important as men's personal networks of close family and friends. The effectiveness of partnering with HIV-positive POL to promote access to and retention in treatment should be explored.

Limitations

This study is not without limitations. Data presented from the structured questionnaire cannot be taken as being representative of the study population, as the sample size is small and probabilistic sampling was not undertaken. The results of this study do not represent the experiences of all men in this setting or indeed all men living in high HIV prevalence settings in South Africa. Specifically, men's networks and relationships may look very different in urban contexts or among men who have migrated from their home communities. It is important to note the men in the present study have not themselves migrated, but live in a context of high levels of out-migration.

CONCLUSIONS

The results of this study provide understanding of men's networks and ideas of informal leadership in this high HIV-prevalence setting which will help to inform future POL interventions. Such interventions should seek to understand perceptions of leadership in the target population, keeping in consideration that elected or formal leadership, prestige, and social standing might carry less weight in informal opinion leadership potential than capacity for interpersonal support and caring. Future studies should aim to determine empirically what leadership characteristics are most closely associated with behavior change related to HIV testing and treatment. Future POL interventions for the promotion of HIV testing and care should leverage the strength familial relationships and relationships among people living with HIV.

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Table 1.

Participant Characteristics

	IDI participants* (n=25)	All participants† (n=45)
Age (mean years)	35 (range: 18–49)	30 (range: 18–49)
HIV Status		
<i>HIV-negative</i>	10	30
<i>HIV-positive</i>	15	15
<i>Engaged in care‡</i>	10	10
<i>Not engaged in care</i>	5	5
Marital status		
<i>Never married</i>	13	13
<i>Married</i>	8	27
<i>Separated or divorced</i>	1	2
<i>Widowed</i>	3	3
Education		
<i>No school</i>	1	1
<i>Some primary</i>	1	3
<i>Completed primary</i>	3	3
<i>Some high school</i>	11	20
<i>Completed high school</i>	9	18

* Participants who participated in an in-depth interview (in addition to the structured questionnaire)

† Total participants, all of whom completed the structured questionnaire

‡ Receiving HIV-care at a clinic at the time of recruitment