



Published in final edited form as:

AIDS Care. 2012 ; 24(4): 413–419. doi:10.1080/09540121.2011.608796.

Perceived acceptability of home-based couples voluntary HIV counseling and testing in Northern Tanzania

B. Njau^{a,b,*}, M.H. Watt^c, J. Ostermann^{c,d}, R. Manongi^{a,b}, and K.J. Sikkema^{c,e}

^aKilimanjaro Christian Medical College of Tumaini University, Moshi, Tanzania

^bKilimanjaro Christian Medical Centre, Moshi, Tanzania

^cDuke Global Health Institute, Duke University, Durham, USA

^dCenter for Health Policy and Inequalities Research, Duke University, Durham, USA

^eDepartment of Psychology and Neuroscience, Duke University, Durham, USA

Abstract

It is estimated that 5.6% of the Tanzanian population ages 15–49 are infected with HIV, but only 30% of adults have ever had an HIV test. Couples' testing has proven to increase testing coverage and introduce HIV prevention, but barriers include access to testing services and unequal gender dynamics in relationships. Innovative approaches are needed to address barriers to couple's testing and increase uptake of HIV testing. Using qualitative data collection methods, a formative study was conducted to assess the acceptability of a home-based couples counseling and testing (HBCCT) approach. Eligible study participants included married men and women, HIV-infected individuals, health care and home-based care providers, voluntary counseling and testing counselors, and community leaders. A total of 91 individuals participated in focus group discussions (FGDs) and in-depth interviews conducted between September 2009 and January 2010 in rural settings in Northern Tanzania. An HBCCT intervention appears to be broadly acceptable among participants. Benefits of HBCCT were identified in terms of access, confidentiality, and strengthening the relationship. Fears of negative consequences from knowing one's HIV status, including stigma, blame, physical abuse, or divorce, remain a concern and a potential barrier to the successful provision of the intervention. Lessons for implementation highlighted the importance of appointments for home visits, building relationships of confidence and trust between counselors and clients, and assessing and responding to a couple's readiness to undergo HIV testing. HBCCT should address HIV stigma, emphasize confidentiality, and improve communication skills for disclosure and decision-making among couples.

Keywords

HIV/AIDS; HIV testing; home-based counseling; testing; Tanzania

Background

HIV/AIDS continues to be a public health priority in sub-Saharan Africa, where an estimated 33 million people are infected with HIV. In Tanzania, approximately 6% of the adult population are infected with HIV (UNAIDS, 2009; United Republic of Tanzania Ministry of Health, 2009b). The Government of Tanzania has scaled up voluntary

counseling and testing (VCT) services in health facilities across the country (United Republic of Tanzania Ministry of Health, 2009a; United Republic of Tanzania National Bureau of Statistics, 2007), but VCT uptake has remained low, with fewer than 30% of adults reporting ever receiving an HIV test (Tanzania Commission for AIDS, Zanzibar AIDS Commission, National Bureau of Statistics, Office of the Chief Government Statistician, & Macro International Inc., 2008; United Republic of Tanzania Ministry of Health, 2009b). Innovative strategies for HIV testing are needed to increase uptake and link infected individuals to care, especially given recent evidence that early detection and treatment can help prevent the sexual transmission of HIV at a community level (Cohen, Shaw, McMichael, & Haynes, 2011; Smith, Powers, Kashuba, & Cohen, 2011).

HIV testing for couples has been promoted as a strategy to improve testing rates and as a gateway to HIV prevention (Burton, Darbes, & Operario, 2010; Painter, 2001). Couple's testing has the potential to improve use of HIV prevention interventions (Farquhar et al., 2004) and identify and treat discordant couples (Matovu, 2010). However, significant challenges to uptake of couples testing have been documented in sub-Saharan Africa (Bateganya, Abdulwadud, & Kiene, 2010; UNAIDS, 2009; UNAIDS & WHO, 2005), including Tanzania (Mbago, 2004; Tanzania Commission for AIDS, National Bureau of Statistics, & ORC Macro, 2005; United Republic of Tanzania Ministry of Health, 2009b). Factors associated with reluctance to get tested as a couple include male dominance in decision-making and women's fear of negative outcomes, such as violence or divorce, in the event of a positive test result (Maman, Mbawambo, Hogan, Kilonzo, & Sweat, 2001; Mbago, 2004; United Republic of Tanzania Ministry of Health, 2009b; Wringe et al., 2008).

The Tanzanian Government has identified door-to-door recruitment as a key strategy to promote universal HIV testing, providing an environment conducive to widespread offer of a home-based couples counseling and testing (HBCCT) intervention (United Republic of Tanzania Ministry of Health, 2009a; United Republic of Tanzania National Bureau of Statistics, 2007). Extending home-based counseling and testing has the potential to reduce cost, logistical barriers and stigma, and enhance the linkage of infected persons to care and social support (Helleringer, Kohler, Frimpong, & Mkandawire, 2009; Mutale, Michelo, Jurgensen, & Fylkesnes, 2010). Several studies have demonstrated the feasibility and cost-effectiveness of home-based counseling and testing (Bateganya et al., 2010; Ganguli, Bassett, Dong, & Walensky, 2009; Menzies et al., 2009), and a recent randomized control trial found that home-based testing was associated with higher uptake and greater identification of HIV-infected persons than clinic-based testing (Lugada et al., 2010). The potential of home-based interventions to encourage, promote, and provide HIV testing to couples has not yet been explored.

In order to address this gap, we conducted a formative qualitative study among key informants in two rural villages in Northern Tanzania to identify components, characteristics, and acceptability of an HBCCT intervention to improve HIV testing uptake and disclosure.

Methods

Setting

The study was conducted between September 2009 and January 2010 in two rural villages of the Kilimanjaro Region, Tanzania. Villages were selected based on their comparatively high HIV prevalence (4.3–6% compared with an overall prevalence of 1.9% in Kilimanjaro region) (Ostermann et al., 2011; Tanzania Commission for AIDS et al., 2008).

Participants

Purposive sampling (Singleton & Straits, 2005; Spencer, Ritchie, & O'Connor, 2003) was employed to select 91 participants. In-depth interviews were conducted with eight married men, eight married women, six HIV-positive individuals, four health care providers, two home-based care providers, and four VCT counselors. Focus group discussions (FGDs) included 18 married men, 17 married women, four village leaders, and 20 members of local health committees. The married men and women were recruited through local leaders; HIV-positive individuals were recruited during clinic appointments; health care providers were recruited at local public and private health facilities; and village leaders and members of the local health committees were recruited through local government structures.

Data collection

Semi-structured interviews and FGDs addressed attitudes towards HIV testing, perceived benefits, and barriers to VCT both in the home and for couples, and participants' willingness to be a part of such an intervention. Interviews and FGDs were facilitated by the first author [B.N.] and two female trained interviewers conversant in both Kiswahili and English. Interviews were conducted in private settings convenient to the respondents. Participants received reimbursement for their participation (approximately US\$2.50). The study protocol received ethical clearance from Duke University, Tanzania's National Institute for Medical Research, and the Kilimanjaro Christian Medical College Research Ethics Committee.

Data management and analysis

All interviews and FGDs were conducted in Kiswahili (the official language of Tanzania), tape-recorded, transcribed verbatim, and translated into English by the first author [B.N.]. A framework approach (Singleton & Straits, 2005; Spencer et al., 2003), combining the use of ATLAS.ti and manual techniques guided the identification of key themes used to develop the thematic framework, which was systematically applied to sort data (Singleton & Straits, 2005; Spencer et al., 2003). Translated transcripts were coded by the first author, and an independent qualitative analyst verified the coded data. Discrepancies in coding were discussed among analysts and resolved. The texts were read repeatedly to identify major themes and each theme was broken down into concepts. Representative, verbatim quotes were selected to illustrate key findings.

Results

The sample demographics are summarized in Table 1. Respondents had an overall positive view towards a home-based intervention to provide HIV counseling and testing for couples, though several concerns were raised. Themes that emerged related to perceived benefits and barriers, and lessons for the implementation of an HBCCT intervention.

Perceived benefits

A couples counseling and HIV testing intervention that was delivered in the home environment was seen to have considerable benefits. In addition to alleviating barriers of time and travel, participants felt that approaching couples in their homes would increase the perception of both the importance and normalcy of couples HIV testing. As one participant stated, "If a couple is visited at home by a counselor, they will understand how serious and important HIV testing is" (married man, 37 years old).

Respondents felt that getting tested in the home offered greater privacy and confidentiality than clinical settings because "most couples would prefer not to be seen walking together to a public HIV testing center" (married woman, 28 years old). This was particularly noted as a benefit for men, who were reluctant to be seen in the clinic for HIV testing. Women were

eager to have an option for HIV testing that they felt their partner would participate in, as a way to share the burden and challenges of HIV testing.

Men will agree to test at home. We can talk to our husbands and they will agree to test for HIV at home. This is different from asking your husband to accompany you to go and test for HIV at the health facility. (married woman, 35 years old)

In addition to offering greater privacy, the home environment was also seen as a more conducive place to receive test results, react in a natural way, and discuss their results.

At the clinic, you see someone feeling so sad after receiving positive results.... some even cry and you know that the results are not good. At home, no one will see me crying. (FGD, married woman)

Several respondents also mentioned the benefit of HBCCT for strengthening and deepening the marital relationship, because it provides an opportunity to reflect upon fundamental values and priorities in a relationship. Most health care providers felt strongly that the HBCCT intervention should emphasize getting tested as a couple as a sign of care and responsibility in marriage. A married man reflected a similar sentiment.

I believe that home based couples HIV testing is an initial step in bringing couples closer and to increase trust among themselves. (married man, 55 years old)

Perceived barriers

Participants mentioned potential barriers that may hinder uptake of an HBCCT intervention. While many respondents talked about a home-based intervention offering privacy, others expressed concerns about the lack of privacy in the home setting. A village leader explained: "You know with our small houses and extended families, [privacy] may be a problem in some households" (female villager leader, 36 years old). There were also concerns about the confidentiality and anonymity of HIV test results, particularly if the counselor came from the same community as the couple.

Other concerns reflected general barriers to couples' HIV testing, not specific to a home-based intervention. In particular, respondents expressed fear of knowing their HIV status and having their status shared with their partner. This was especially the case among participants who considered themselves at high risk for contracting HIV because of their infidelity.

Most couples are not faithful and live by suspecting one another. This has created disharmony among couples, especially when a man is asked by his wife to go for HIV testing. So in most cases men tend to go alone for HIV testing and once he has received the result he will now agree to go with his wife. However, this will depend on the HIV test results. If the results are positive he will never disclose and will not agree to go for testing. (married man, 50 years old)

Barriers to couples testing also included potential conflicts that may arise following a positive HIV test, particularly in unstable relationships marked by distrust. A married woman explained: "The barrier is the partner's reaction to HIV positive results, that a person may be blamed or stigmatized or be discriminated, such as being beaten or divorced" (FGD, married women). Some health care providers felt that the home environment may pose a risk to them in the event of a violent reaction. A female counselor talked about how some people who "didn't want to accept the results" of a positive HIV test have acted out against her in a clinic settings and threatened her. If this happened in the home environment, they felt there wouldn't be any recourse or protection. A male respondent echoed this in stating that some families who are "violent by nature" can be "dangerous" to counselors if they receive unexpected results.

Finally, an important barrier mentioned to uptake of an HBCCT intervention was men's general reluctance to participate in HIV testing. Both men and women talked about HIV testing as a woman's domain, with men relying upon women's HIV test results as a proxy of their own status. Given existing power structures in relationships, it may ultimately be the man who will make the decision of whether or not to test as a couple. As a married man explained, "We men have a final say".

Lessons for implementation

Home-based couples counseling and testing (HBCCT) was regarded as an opportunity for early detection, early initiation of treatment and care, and introduction of risk reduction strategies. Respondents identified barriers and voiced strategies and approaches that would facilitate a successful intervention. First, respondents recognized the difficulties of finding couples at home together, and felt that it may be necessary to make multiple visits to the home, set an appointment time, and include options for weekend visits. Second, in the process of visiting couples' homes, they felt it was essential to build a relationship of confidence and trust between counselors and clients, in order to promote the decision for HIV testing. Part of building confidence and trust is ensuring that the process is done in private, without other family members present.

Third, the initial counseling regarding whether or not to test should go beyond an imperative to test, to actually describe the benefits of testing. During focus groups with village leaders, fear of testing was primarily due to lack of information on the benefits of HIV testing, as explained by this participant:

People ask themselves: Once I test and am found to be HIV positive, what next?
We are told: go for HIV testing... We are supposed to be told about the availability of other support, such as drugs [ARVs], supplementary food and social care.
(village leader, married man, 46 years old)

Participants suggested that counselors should recognize that not all couples will be ready to undergo testing, and they should have the ability to assess couples' readiness to get their results and share them with each other.

Sharing of HIV test results among couples will depend on two things. First is the ability of a couple to accept the test results. Second is the ability of couples to understand the consequences of living with HIV and how to take care of the one who is HIV positive. After assessing the two issues then it is possible to agree to share the HIV test results. (female counselor, married, 48 years old)

Counselors felt it was important that all pieces of the counseling and testing procedure should be done as a couple and in the home environment. They felt that going through each step as a couple would increase the likelihood of disclosure and lead to better outcomes, such as HIV risk reduction. They felt that if the couple were asked to come to the clinic to collect the results, they would neither come nor accept the results as accurate. For couples who test positive for HIV, counselors felt strongly that they needed to have good post-test counseling "to explore the implications of their test results on their relationship, marriage and sex life" and proper referrals to care and treatment.

Finally, respondents felt that a broad intervention offering HBCCT should be accompanied by a community-based information campaign alerting and informing community members of the intervention, which might make them more willing to participate. Village leaders emphasized that they would like to be included in that campaign to promote HIV testing.

Discussion

The Government of Tanzania has recognized a door-to-door recruitment approach as a key strategy for universal HIV testing, providing an environment conducive to widespread offer of an HBCCT intervention (United Republic of Tanzania Ministry of Health, 2009a; United Republic of Tanzania National Bureau of Statistics, 2007). Our findings indicate that such an intervention is likely to be acceptable among couples and service providers in Northern Tanzania, although concerns remain that might limit uptake.

The perceived benefits of HBCCT were primarily related to normalization of testing, improved access, increased privacy and confidentiality, and strengthening of the marital relationship. These factors make the intervention appealing and may increase uptake of HIV testing. However, barriers were mentioned that may mitigate this effect, including concerns about ensuring privacy in the home environment, fear of getting tested and sharing results with a partner, and men's reluctance to participate in couples testing. Most barriers were general to couples HIV testing, and may potentially be addressed through appropriate counseling in the home environment.

Respondents pointed to unequal gender relations as an important barrier to uptake of couples testing, but there were indications that HBCCT may offer opportunities to overcome this barrier. Men may be reluctant to get tested for several reasons, including a heightened sense of risk related to extramarital relationships and resultant fear of receiving a positive diagnosis, and embarrassment about being seen in the clinic seeking HIV testing. Women may be reluctant to get tested because of fear of negative outcomes such as divorce or violence. These gender-specific barriers have been identified in other settings in sub-Saharan Africa (Maman et al., 2009, 2001). Testing in the home can address men's reluctance to go to the clinic, and appropriate couples counseling can address women's fears of a positive diagnosis and help to mitigate partners' negative reactions after a positive diagnosis. Women were encouraged by the possibility of having another option for HIV testing that may involve their partner, and respondents talked about the potential for HBCCT to strengthen the marital relationship. The HBCCT approach may make a couple more ready to share their results and jointly act on the outcome to reduce HIV risk behaviors.

Similar to other studies on HIV testing, stigma was mentioned as a general barrier for VCT (Genberg et al., 2009; Maman et al., 2009; Ostermann et al., 2011). Home testing allows couples to know their status without facing the stigma associated with facility-based HIV testing (Grabbe & Bunnell, 2010). At the same time, the opportunity to test at home may increase the perception of HIV testing as important and normal, and may contribute to decreased HIV stigma. An HBCCT intervention should explicitly acknowledge and address stigma.

Lack of confidentiality was mentioned as another important barrier to VCT. Home counseling and testing was viewed by most participants as an opportunity to increase confidentiality, however, finding a convenient place where privacy can be secured may provide a challenge in some homes. The use of local lay counselors, suggested as a strategy to expand testing outreach and promote sustainability in resource-limited settings (Baiden et al., 2007; Ganguli et al., 2009; Ivers et al., 2010), could result in concerns about confidentiality and may represent a barrier to uptake of HBCCT (April et al., 2009; Ganguli et al., 2009; UNAIDS, 2009). It may be more appropriate to use trained counselors from other geographical locations (Helleringer et al., 2009), though it is not clear that such measures are sufficient (Ostermann et al., 2011).

Health care providers were enthusiastic about an HBCCT intervention, but hinted at logistical complications and time requirements related to multiple home visits. Providers

also pointed to the lack of protection for counselors in the home environment, including fear of violence from clients who may be reluctant to accept a positive result. A study among VCT service providers in Kenya observed experiences of abuse against VCT service providers in a clinic setting (Hamilton et al., 2008), which could be amplified in a home environment. The findings point to the need for adequate pre-test counseling to ensure couples' readiness to test and accept their results, and training for counselors to ensure their physical and emotional well-being. For couples who decline testing after counseling, communication skills and information specific to reduction of HIV risk behaviors should be provided.

This study has several limitations. First, as a formative study, the findings are preliminary and may not be applicable to other setting. Second, the study was limited to married or cohabiting couples, and no information was obtained from other family members who may influence HIV testing decisions. Lastly, study participants were purposively selected and may not be representative of other individuals or other settings.

Importantly, the study findings indicate that an effectively implemented HBCCT intervention that attends to specific barriers to couples VCT, including gender imbalances and the fear of knowing and sharing one's HIV status, has the potential to increase uptake of HIV testing, reduce community-level stigma, and increase HIV prevention behavior. Future research should include the development and pilot testing of locally appropriate HBCCT interventions with testing uptake as the primary outcome. Qualitative data collection and analysis should examine participants' perceptions of the testing model, and reasons for accepting or refusing testing, including the influence of other family members on testing decisions. Successful pilot studies should be followed by a community-level randomized control trial, with associated cost effectiveness analyses, to determine the relative costs and benefits of HBCCT in comparison with other testing modalities.

Acknowledgments

This study was supported by the Duke Center for AIDS Research (CFAR) (5P30 AI064518-04). We gratefully acknowledge Miriam Taegtmeier of Liverpool School of Tropical Medicine for her constructive input, and Frances Aunon for her editing of the manuscript. We also thank all participants who agreed to participate in the formative study.

References

- April MD, Walensky RP, Chang Y, Pitt J, Freedberg KA, Losina E, Wood R. HIV testing rates and outcomes in a South African community, 2001–2006: Implications for expanded screening policies. *Journal of Acquired Immune Deficiency Syndromes*. 2009; 51(3):310–316. [PubMed: 19582895]
- Baiden F, Akanlu G, Hodgson A, Akweongo P, Debpuur C, Binka F. Using lay counsellors to promote community-based voluntary counselling and HIV testing in rural Northern Ghana: A baseline survey on community acceptance and stigma. *Journal of Biosocial Science*. 2007; 39(5):721–733. [PubMed: 17207292]
- Bateganya MH, Abdulwadud OA, Kiene SM. Home-based HIV voluntary counseling and testing (VCT) for improving uptake of HIV testing. *Cochrane Database System Review*. 2010; 7(2)10.1002/14651858.CD006493.pub2
- Burton J, Darbes L, Operario D. Couples-focused behavioral interventions for prevention of HIV: Systematic review of the state of evidence. *AIDS and Behavior*. 2010; 14(1):1–10. [PubMed: 18843530]
- Cohen MS, Shaw GM, McMichael AJ, Haynes BF. Acute HIV-1 infection. *New England Journal of Medicine*. 2011; 364(20):1943–1954. [PubMed: 21591946]
- Farquhar C, Kiarie JN, Richardson BA, Kabura MN, John FN, Nduati RW, John-Stewart GC. Antenatal couple counseling increases uptake of interventions to prevent HIV-1 transmission. *Journal of Acquired Immune Deficiency Syndromes*. 2004; 37(5):1620–1626. [PubMed: 15577420]

- Ganguli I, Bassett I, Dong K, Walensky R. Home testing for HIV infection in resource-limited settings. *Current HIV/AIDS Reports*. 2009; 6(4):217–223. [PubMed: 19849965]
- Genberg B, Hlavka Z, Konda K, Maman S, Chariyalertsak S, Chigono A, Celetano D. A comparison of HIV/AIDS-related stigma in four countries: Negative attitudes and perceived acts of discrimination towards people living with HIV/AIDS. *Social Science & Medicine*. 2009; 68(12): 2279–2287. [PubMed: 19427086]
- Grabbe KL, Bunnell R. Reframing HIV prevention in sub-Saharan Africa using couple-centered approaches. *Journal of the American Medical Association*. 2010; 304(3):346–347. [PubMed: 20639571]
- Hamilton C, Okoko D, Tolhurst R, Kilonzo N, Theobald S, Taegtmeier M. Potential for abuse in the VCT counselling room: Service provider's perceptions in Kenya. *Health Policy and Planning*. 2008; 23(6):390–396. [PubMed: 18701551]
- Helleringer S, Kohler HP, Frimpong JA, Mkandawire J. Increasing uptake of HIV testing and counseling among the poorest in Sub-Saharan countries through home-based service provision. *Journal of Acquired Immune Deficiency Syndromes*. 2009; 51(2):185–193. [PubMed: 19352202]
- Ivers LC, Mukherjee JS, Leandree FR, Rigodone J, Cullen KA, Jennifer F. South-south collaboration in scale-up of HIV care: Building human capacity for care. *AIDS*. 2010; 24(Suppl 1):S73–S78. 10.1097/01.aids.0000366085.14064.6f [PubMed: 20023443]
- Lugada E, Levin J, Abang B, Mermin J, Mugalanzi E, Namara G, Bunnell R. Comparison of home and clinic-based HIV testing among house-hold members of persons taking antiretroviral therapy in Uganda: Results from a randomized trial. *Journal of Acquired Immune Deficiency Syndromes*. 2010; 55(2):245–252. [PubMed: 20714273]
- Maman S, Ablor L, Parker L, Lane T, Chirowodza A, Ntogwisangu J, Fritz K. A comparison of HIV stigma and discrimination in five international sites: The influence of care and treatment resources in high prevalence settings. *Social Science & Medicine*. 2009; 68(12):2271–2278. [PubMed: 19394121]
- Maman S, Mbwapo J, Hogan NM, Kilonzo GP, Sweat M. Women's barriers to HIV-1 testing and disclosure: Challenges for HIV-1 voluntary counselling and testing. *AIDS Care*. 2001; 13(5):595–603. [PubMed: 11571006]
- Matovu JKB. Preventing HIV transmission in married and cohabiting HIV-discordant couples in sub-Saharan Africa through combination prevention. *Current HIV Research*. 2010; 8(6):430–440. [PubMed: 20636280]
- Mbago M. Socio-demographic correlates of desire for HIV testing in Tanzania. *Sexual Health*. 2004; 1(1):13–21. [PubMed: 16335292]
- Menzies N, Abang B, Wanyenze R, Nuwaha F, Mugisha B, Coutinho A, Blandford J. The cost and effectiveness of four HIV counseling and testing strategies in Uganda. *AIDS*. 2009; 23(3):395–401. [PubMed: 19114865]
- Mutale W, Michelo C, Jurgensen M, Fylkesnes K. Home-based voluntary HIV counselling and testing found highly acceptable and to reduce inequalities. *BMC Public Health*. 2010; 10(1):347–354. [PubMed: 20553631]
- Ostermann J, Reddy EA, Shorter MM, Muiruri C, Mtaló A, Itemba DK, Thielman NM. Who tests, who doesn't, and why? Uptake of mobile HIV counseling and testing in the Kilimanjaro region of Tanzania. *PLoS ONE*. 2011; 6(1):e16488. [PubMed: 21304973]
- Painter TM. Voluntary counseling and testing for couples: A high-leverage intervention for HIV/AIDS prevention in sub-Saharan Africa. *Social Science & Medicine*. 2001; 53(11):1397–1411. [PubMed: 11710416]
- Singleton, RA.; Straits, BC. *Approaches to social research*. 4. Oxford University Press; New York, USA: 2005.
- Smith K, Powers KA, Kashuba AD, Cohen MS. HIV-1 treatment as prevention: The good, the bad, and the challenges. *Current Opinions in HIV & AIDS*. 2011; 6(4):315–325.
- Spencer, L.; Ritchie, J.; O'Connor, W. Carrying out qualitative analysis. In: Ritchie, J.; Lewis, J., editors. *Qualitative research practice: A guide for social science students and researchers*. London: Sage; 2003. p. 219-262.

- Tanzania Commission for AIDS, National Bureau of Statistics, & ORC Macro. Tanzania HIV/AIDS Indicator Survey 2003–2004. Dares-Salaam: Office of the Chief Government Statistician, Macro International; 2005.
- Tanzania Commission for AIDS, Zanzibar AIDS Commission, National Bureau of Statistics, Office of the Chief Government Statistician, & Macro International Inc. Tanzania HIV/AIDS and malaria indicator survey 2007–2008. Dar es Salaam: Tanzania Commission for AIDS, Zanzibar AIDS Commission, National Bureau of Statistics, Office of the Chief Government Statistician, Macro International; 2008.
- UNAIDS. AIDS epidemic update. Geneva: Joint United Nations Programme on HIV/AIDS; 2009.
- UNAIDS, & WHO. AIDS epidemic update. Geneva: Joint United Nations Programme on HIV/AIDS, World Health Organization; 2005. p. 1-98.
- United Republic of Tanzania Ministry of Health. Guidelines for HIV Testing and Counseling (HTC) in clinical settings. Dar es Salaam: The United Republic of Tanzania Ministry of Health and Social Welfare National AIDS Control Programme; 2009a.
- United Republic of Tanzania Ministry of Health. HIV/AIDS/STI Surveillance Report: Report Number 21. Vol. 21. Dar es Salaam: The United Republic of Tanzania Ministry of Health of Social Welfare National AIDS Control Programme; 2009b.
- United Republic of Tanzania National Bureau of Statistics. Tanzania service provision assessment survey 2006. Dar es Salaam, Tanzania: National Bureau of Statistics & Macro International; 2007.
- Wringe A, Isingo R, Urassa M, Maiseli G, Manyalla R, Chagalucha J, Zaba B. Uptake of HIV voluntary counselling and testing services in rural Tanzania: Implications for effective HIV prevention and equitable access to treatment. *Tropical Medicine & International Health*. 2008; 13(3):319–327. [PubMed: 18397395]

Table 1

Characteristics of participants.

	Women (n=48)	Men (n=43)
Median age (years)	46	41
Education		
Primary or less	46 (95.8%)	43 (100%)
Secondary or more	2 (4.2%)	0 (0.0%)
Occupation		
Farmer	24 (50%)	10 (23.3%)
Business	9 (18.7%)	14 (32.5%)
Health care providers	8 (16.6%)	2 (4.7%)
Village leaders/members of health committee	7 (14.7%)	17 (39.5%)
Marital status		
Married	33 (68.7%)	25 (58.1%)
Cohabiting	10 (20.8%)	14 (32.6%)
Others	5 (10.5%)	4 (9.3%)