Published in final edited form as:
J Health Psychol. 2015 February ; 20(2): 173–187. doi:10.1177/1359105313500685.

Barriers to and acceptability of provider-initiated HIV testing and counselling and adopting HIV prevention behaviours in rural Uganda: A qualitative study

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Abstract

In Uganda, a nation-wide scale-up of provider initiated HIV testing and counseling (PITC) presents an opportunity to deliver HIV prevention services to large numbers of people. In a rural Ugandan hospital, focus group discussions and key informant interviews were conducted with outpatients receiving PITC and staff to explore the HIV prevention information, motivation, and behavioral skills strengths and weaknesses, and community and structural-level barriers to PITC acceptability and HIV prevention among this population. Strengths and weakness occurred at all levels, and results suggest brief client-centered interventions during PITC may be an effective approach to increase prevention behaviours in outpatient settings.

Keywords

AIDS; HIV; Prevention; Screening; Health Behaviour

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Competing Interests: None

Introduction

One of the earliest and hardest hit countries by the epidemic, Uganda had the highest rates of HIV in the world in the early 1990s, with estimates as high as 30% (Feuer, 2004). Attributed to HIV prevention efforts (Kirby, 2008), rates declined throughout the decade to as low as 5% in 2001 (Hogle et al., 2002). Though Uganda's HIV reductions have been described as an early success story by many, the epidemic is far from defeated. Rates have stagnated for the last 10 years between 6.5 and 7%, leaving 1.2 million people currently infected (UNAIDS, 2010). A decade of stalled progress highlights the need to strengthen HIV prevention and to uncover what barriers have kept Uganda's HIV epidemic at a standstill.

One avenue for prevention efforts that may be impactful in Uganda is an opt-out approach such as provider initiated HIV testing and counselling (PITC). An increase in PITC services in recent years coupled with high rates of acceptability (Nakanjako et al., 2007) present an opportunity to deliver HIV prevention messages to large groups of people, with the potential to increase the number of individuals who are aware of their status, link them to care, and reduce HIV risk behaviours (Kiene et al., 2010). In order to implement effective interventions, consensus supports the importance of continuously reassessing prevention approaches and tailoring such approaches to the particular community's context, which is often achieved through formative research.

There are commonalities in barriers and facilitators to PITC and HIV prevention behaviours across studies from developing nations. To conceptualize these determinants, the Information-Motivation-Behavioral Skills (IMB) model of preventive behaviors has frequently been used and cited in the HIV literature (Fisher and Fisher, 1992; Fisher and Fisher, 2000). This model posits there are three main factors which affect whether someone will engage in prevention or risk behaviours. (1) HIV prevention *information*, which includes one's knowledge of HIV and prevention-related facts. For example, myths about how HIV is transmitted have been shown to impede prevention behaviours (Simbayi et al., 2005) and knowledge about HIV prevention is associated with an increased likelihood of having been tested for HIV (Nguyen et al., 2013). (2) HIV prevention *motivation* includes one's motivation to engage in preventative behaviours, which includes attitudes towards a prevention behaviour, perceived social norms surrounding that behaviour, and one's intention to engage in that behaviour. Barriers that manifest as motivational deficits to HIV testing include a fear of learning one's status, lack of perceived HIV risk, and a fear of having to change sexual practices if HIV positive (Weiser et al., 2006). Factors that manifest as motivational strengths to HIV testing among Ugandans include a new relationship or marriage, planning for the future, distrust of one's sexual partner, and illness, disease, or death of a partner (Muller et al., 1992). (3) *Behavioural skills* is the third component of the IMB which is defined as one's actual and perceived ability to carry out the prevention measures. Among South African men, the perceived ability to have one sexual partner was the strongest predictor of one's intentions to reduce their number of sexual partners (Nyembezi et al., 2012). A behavioural skill deficit commonly cited as a barrier to safe sex is the inability to negotiate condom use with one's partner (Fisher et al., 2004), which can be further jeopardized by alcohol use during sex (Fisher et al., 2004), a practice common in

Uganda (Zablotska et al., 2006). The IMB model posits that the effect of information and motivation on HIV prevention behaviours works mainly through the acquisition and use of behavioural skills; although in some populations, information and motivation may be direct predictors of behaviour.

The IMB model encompasses individual and interpersonal-level factors influencing prevention behaviours, but the literature also supports the importance of structural and community-level barriers to HIV prevention behaviours (Tomlinson et al., 2010). For example, HIV-stigma has been shown to influence both HIV prevention behaviours (Mbonu et al., 2009)and the use of testing and counselling services (Kalichman and Simbayi, 2003). Furthermore, a review of the literature identified and categorized structural barriers common in resource-poor settings into three broad categories: 1) lack of economic development manifested through poverty; 2) mobility; and 3) gender inequalities (Parker et al., 2000). These structural factors are important to consider in the context of Uganda, where evidence points to limited HIV resources (Plumb, 2011), high rates of mobility in some communities (Nyanzi et al., 2004), and power differentials between men and women (Mirembe and Davies, 2001).

The current study explored the HIV prevention information, motivation, and behavioural skills strengths and weaknesses, and community and structural-level barriers to HIV prevention among individuals receiving PITC in the outpatient department of a rural Ugandan hospital. Our objectives in this formative research were to identify important factors that influence HIV prevention behaviours in this population and explore the acceptability of PITC in order to design an intervention to improve the counselling during PITC.

Method

Participants and setting

Fifty six (27 female, 29 male) patients attending an outpatient clinic and receiving provider-initiated HIV-testing and counselling at a rural hospital in Butambala District, Uganda participated in one of eight focus groups. Twenty three (14 female, 9 male) staff members also participated in one of three focus group discussions: nurse group (8 female), counsellor group (5 female, 2 male), medical and clinical officer group (1 female, 7 males). Additionally 4 staff (3 female, 1 male) participated in key informant interviews: nurses (n=2), HIV counsellors/peer educators (n=2). The purpose of both the focus groups and interviews was to elicit patient and staff perceptions about their community's strengths and weaknesses related to engaging in HIV prevention behaviours and their input about how to improve counselling during PITC. Gombe Hospital is one of several rural public hospitals in Uganda offering PITC free of charge to all outpatients. The PITC uptake rate during the time of the study was over 88%. The hospital performs approximately 10,000 provider initiated tests per year despite having only 60% of the recommended staff for the facility. The hospital provides free antiretroviral treatment (ARVs) to patients eligible to receive treatment based on the WHO guidelines (at the time of the study: $CD4^+$ cell count < 200 cells/mm^3 and/or WHO clinical stage III and IV).

Eligibility for participation required being at least 18 years of age, not having tested for HIV within the prior 3-months, not having previously tested HIV-positive, having had sexual intercourse within the prior 6 months, and not attending the clinic specifically for voluntary counselling and testing (VCT), since the aim of the study was PITC acceptance and motivation may be different among patients presenting for VCT. More than half of the patient sample (64.3%) was currently married, and 17% of married men had more than one wife. Average age was 33.5 (SD 13.1, range 18–70). The majority of the sample (71.4%) was of the Baganda tribe, 21.4% Banyarwanda, and the remainder of another tribe. 35.7% were Catholic, 25% Muslim, 26.8% Protestant, and 10.7% Born Again Christian. 5.4% reported no schooling, 49.9% primary 7 or less, and 44.6% reported 1 or more years of secondary school. Nineteen (33.9%) participants (12 female, 7 male) reported no monetary income, of those with a regular monetary income, average monthly income was 101,702 Shillings (~ USD$ 53), SD 133,238, range 5,000–750,000.

Procedure

A research assistant non-systematically approached outpatients waiting to be seen by the clinician. Patient focus groups were held after patients had seen the clinician and received PITC. Staff on duty were asked to voluntarily attend focus groups/key informant interviews. At enrollment participants provided written informed consent.

Using standard focus group procedures (Basch, 1987) and a focus group discussion protocol adapted from prior IMB-based qualitative work (Fisher et al., 2004), an experienced focus group facilitator conducted all of the focus groups in Luganda, the language spoken by the majority of people in the area and understood by all study participants. Key informant interviews were conducted by an experienced interviewer one-on-one with clinic staff in a private space in the hospital. The patient focus group protocol included semi-structured, open-ended questions on the perceived prevalence of HIV risk and prevention behaviors in the community, barriers to and acceptance of PITC and HIV prevention behaviors, and suggestions to improve PITC at the clinic. The protocol used during staff focus group and key informant interviews included questions addressing the topics discussed in patient focus groups, as well as questions assessing PITC procedures and HIV counseling content, barriers in engaging patients in PITC and HIV prevention behaviors, and suggestions for making the provision of safe sex counseling and PITC more effective from a provider perspective. All sessions were audio recorded and were approximately 90 minutes long. Participants were provided with refreshments during the focus groups as is normal practice in similar hospital meetings. Institutional review boards in the U.S. and Uganda and the Uganda National Council for Science and Technology approved the study.

Analysis

The audio recordings of the focus group were transcribed and translated from Luganda into English. Qualitative analysis was informed by a content analysis approach (Smith, 2000). A coding system was developed before the transcripts were examined, with a priori categories derived from IMB model of preventive behaviors. Authors then conducted an initial review of the data and used an empirical approach, developing classifications inductively from the data, to modify the a priori scheme. Trained coders then coded each of the responses. The

coders discussed items on which their coding disagreed and a final code was agreed upon through discussion and consultation with the first author. After verifying and reviewing the coded and labeled focus group responses, the authors identified major themes.

Results

Barriers and strengths related to PITC

IMB-level barriers and strengths—Focus groups revealed individual and interpersonal-level information, motivation, and behavioural skills barriers and strengths related to PITC, which are presented in detail in Table 1. In summary, patients understood many of the benefits of HIV counselling and testing, however, informational barriers related to testing and treatment emerged, including misconceptions about the accuracy of testing and the amount of blood required for testing. Treatment information deficits included a lack of knowledge on the ability to live a long life on treatment when HIV positive and on the availability of HIV treatment. The prevailing attitudes towards PITC were positive. However, conflicting motivational factors, such as the fear of positive test results, emerged as barriers to PITC. Underlying the fear of testing was perceived vulnerability related to one's own mortality and perceived negative outcomes of disclosing one's status to a partner. Though women perceived more negative outcomes to disclosing and testing, they reportedly attend the clinic and test more often than men.

Motivational barriers related to counselling included discussions about sexual behaviour perceived as inappropriate, especially socially unacceptable behaviors such as infidelity, and a fear that counselling would result in judgment and breeched confidentiality; "it is not acceptable and that kind of love is done in hiding so it is hard also to discuss them with a counsellor" (28 year old male). However, patients with higher trust in counsellors' ability did not share these fears. These barriers to counselling also indicate a behavioural skill deficit in communication among patients, which was mirrored in a lack of communication skills in interpersonal relationships regarding PITC, especially among women. Communication strengths, however, were identified in women's ability to find non-confrontational ways to suggest testing to partners. A lack of coping skills related to positive test results was also identified.

Structural/community-level barriers and strengths—In addition to factors related to the IMB model of behavior change, structural and community-level barriers included limited human resources and poor health care infrastructure straining staff ability to deliver PITC. HIV stigma was reportedly high in the community, as the following quote demonstrates: "people always look at people with HIV as people who committed [a] crime" (21 year old female). Fear of the stigma from being labeled HIV positive was a major community-level factor impacting PITC acceptability; "many people fear to come for HIV testing because they are afraid of being seen testing; they [other community members] might think that they are HIV positive even though they test HIV negative" (41 year old female). However, most patients would be willing to test in private setting and with mature and friendly counsellors.

Suggestions for improving counselling during PITC

IMB-level suggestions—Patient and staff suggestions to improve counselling during PITC are presented in Table 2. Patients felt that counselling content should include general HIV prevention information and increased awareness of treatment availability and outcomes. Staff suggested including men who accompany women to the clinic in counsellling sessions and tailoring counselling content to men specifically, since men have more decision-making power in a couple's prevention behaviours. Participants suggested behavioural skills content should focus on coping with HIV positive test results and partner communication skills.

Structural/community-level suggestions—Patients and staff also made suggestions for structural changes to PITC, including condom availability and distribution, and making a separate space to provide PITC and distribute ARVs to protect patient privacy and mitigate fears of stigma. Couples HIV testing and counselling, which is currently offered to patients who want it, was supported by patients and staff held favorable views towards the use of a client-centered counselling approach. Patients and staff felt counsellors were in need of more training in keeping patient confidentiality and a nonjudgmental approach that elicits openness and trust among patients. Finally, staff noted the benefits of using peer educators for counselling.

Barriers and strengths related to HIV prevention behaviours

IMB-level barriers and strengths—Individual and interpersonal barriers and strengths related to HIV prevention behaviours identified in the focus groups mapped onto the IMB model of behavior change. See Table 3 for a comprehensive list of findings. Misinformation related to discordant couples, condom use, and circumcision were among informational barriers identified, however, patients had a general understanding of ways to prevent HIV transmission. Negative attitudes and behavioural skill deficits related to condom use were identified, as well as difficulty buying condoms in public, which is likely related to HIV stigma and stigma related to condom use since community perceptions associate condoms with promiscuity.

Structural/community-level barriers and strengths—Stigma was one of several structural and community-level barriers reported (see Table 3). Gender inequity was identified as obstructing a considerable amount of prevention behaviours. Financial dependence on male partners was said to exacerbate this power differential especially in condom negotiation, and to influence women to engage in transactional sex "to get money for their home problems which their husbands cannot solve" (31 year old single female). A lack of access to female condoms also decreases women's power over safe sex negotiation. Marriage was identified as increasing women's risk of HIV, because of the inability to refuse sex with one's husband and community-wide stigma toward unmarried women makes it difficult to avoid this risk; as one participant explained, unmarried women are "despised in culture" (21 year old married female). Women, however, discussed creative ways to suggest condom use while avoiding conflict, as this quote exemplifies: "Sometimes it doesn't sound polite to tell your partner that you want to use a condom because you are afraid of getting HIV, so you instead tell him that you are afraid of pregnancy" (21 year old married female).

However, women without children are reportedly stigmatized and fear abandonment from their husbands; “If you don’t produce, they can even divorce you” (41 year old married female). This stigma was said to further increase women’s risk for HIV because of women’s desire to reproduce. Other community-level barriers identified include cultural and social norms sanctioning multiple partners among men, which is also influenced by men’s frequent mobility for work. Certain religious beliefs and practices, traditional tribal practices, and cultural practices related to alcohol consumption during sex, were also identified as barriers to prevention behaviours.

Discussion

As found in previous research (Cornman et al. 2011; Fisher et al. 2004), individual and interpersonal-level barriers and strengths to PITC acceptability and HIV prevention uncovered through focus group discussions mapped onto the IMB model of HIV prevention behavior. Patients were generally informed about the benefits of testing and HIV prevention, but key informational deficits were identified, including a lack of knowledge about discordant couples. Bwambale et al., (2008) found similar findings among Ugandan men, with the majority of respondents not believing discordant HIV results are possible. In Uganda, serodiscordance is high; 60% of new infections occur in stable relationships between serodiscordant couples (Merson, 2006), highlighting the need to address this informational deficit. We also identified a lack of information that HIV treatment was available and could prolong life. Prior research found support for a positive relationship between ARV availability and HIV testing (Phakathi et al., 2011). This finding suggests increasing the acceptability of PITC may be dependent on increasing community awareness that individuals living with HIV can live a healthy life if linked to treatment in a timely matter. Misinformation about male circumcision also highlights the need for updating HIV prevention messages communicated to the community to address new prevention technologies, specifically emphasizing the utility of male circumcision in reducing HIV transmission and other knowledge gaps.

Consistent with previous research, a fear of receiving a positive test, negative attitudes towards condoms, and norms deeming safe sex discussions with counsellors unacceptable, were identified as common motivational barriers to PITC and HIV prevention behaviours (Bwambale et al., 2008; Cornman et al., 2011; Fisher et al., 2004; Weiser et al., 2006). Findings identified communication skill deficits among patients as key barriers to both PITC acceptability and prevention behaviours. Previous research supports the importance of communication to prevention behaviours; increases in partner communication have been shown to be positively associated with partner testing and condom use (Gage and Ali, 2005; Sales et al., 2012). The current study revealed strategies deployed by women to overcome such barriers (i.e., suggesting condom use to prevent pregnancy, rather than HIV; using children’s health as a way to motivate men to get tested). These findings are important, as they show women’s innovative ways to protect their health, and may be acceptable strategies to be incorporated into future interventions.

Though individual and interpersonal-level factors were important, barriers outside the IMB model on a structural and community-level may be even more influential to individually-

oriented prevention behaviours and PITC acceptability. Throughout the findings, gender inequity was a recurring factor influencing individual behaviour, including women's ability to refuse sex, to insist on condom use, disclose, and test, as has been found in previous research (Abdool, 2001; Bwambale et al., 2008; Medley et al., 2004). This inequity in sexual decision making has been attributed to men's higher social and cultural status being reflected in sexual relationships (Gupta, 2000). Further disempowering women was poverty and gendered access to resources (Mumtaz et al., 2005). Our findings revealed women, who would likely otherwise be monogamous, engage in transactional sex as a means of economic survival, which has been shown a prevalent consequence of women's poverty in Uganda and other African countries (Béné and Merten, 2008), resulting in increased risk of HIV for women (Dunkle et al., 2004). Abstinence was not a feasible prevention strategy for adults in this community unless an individual decided not to get married, a choice which is culturally unacceptable.

Stigma was another recurring structural barrier related to many of the reasons people refuse HIV-testing and are hesitant to adopt prevention behaviours. Stigma was reportedly prevalent in this community and was manifested in fears of being seen at the clinic and concerns around confidentiality. These findings lend support to previous research in sub-Saharan African showing HIV-related stigma to prohibit condom acquisition (Bell, 2009) and HIV-testing (Bwambale et al., 2008; Kalichman and Simbayi, 2003; Weiser et al., 2006). Bwambale et al., (2008) found confidentiality to be a major issue for Ugandan men regarding testing, with many preferring to test in a distant clinic where they would not be identified. Although this study identified many perceived barriers to HIV testing in this population, it is unknown the extent to which they affect acceptance of HIV testing when it is suggested by a provider. However, one study found that perceived negative reactions of an HIV positive test result from one's partner, fear of disclosing test results to one's partner, and cultural factors are predictors of HIV test refusal (Fanta and Worku, 2012).

Given the high HIV-related stigma in this community, it is not surprising that confidentiality and trust between counsellors and patients, as well as a private space for PITC, were main suggestions for improving counselling, which has been emphasized in previous research in Uganda (Bwambale et al. 2008). Furthermore, the findings suggest training in a nonjudgmental counselling approach may increase patients' willingness to be open during counselling. Beyond ensuring a private setting, other structural barriers to counselling related to limited human resources and healthcare infrastructure common in resource-limited healthcare facilities were major barriers to PITC, suggesting the need for a counselling approach that is brief and feasibly implemented in a resource-limited setting with staff of varying counselling experience.

Limitations

The study has a number of limitations. Patients and staff were unsystematically recruited for participation, leaving the possibility for selection bias to have occurred. Additionally, social desirability may have influenced participants' responses during focus groups and interviews, especially on sensitive topics related to HIV and sexual behaviour. Furthermore, the small sample size and qualitative nature of the data limits the generalizability.

Conclusion

Findings revealed significant factors influencing acceptability of PITC and prevention behaviours in the population that should be considered for future interventions. IMB factors, especially at the interpersonal-level, were identified as important barriers; however, structural and community-level barriers were identified as underpinning, driving factors of a considerable number of individual-level barriers. For example, power in sexual decision making in relationships and couples' communication were identified as impeding PITC and prevention behaviors on an interpersonal-level, however, community-level norms related to gender inequity underlie these barriers. Though, IMB-related barriers were prevalent, the considerable number of barriers identified on the structural and community-level illuminate the importance for interventions targeting higher-level factors. There is a need for community-wide change in HIV-related stigma and gender inequity to increase PITC and prevention behaviour acceptability. Findings revealed that a non-judgmental, collaborative counselling approach that is brief and feasible to implement in a resource-limited clinical setting may be effective. These findings suggest the implementation of brief client-centered interventions during PITC may be an effective approach to increase prevention behaviours in the outpatient setting.

Acknowledgments

The authors thank Dina DePalo and Rebecca Stern for their contributions to reviewing the transcripts and verifying the coding scheme. This work was supported by a grant from the National Institutes of Mental Health (K01MH083536), PI: Kiene.

Funding: This work was supported by a grant from the National Institutes of Mental Health (K01MH083536), PI: Kiene.

References

Abdool Q. Barriers to preventing human immunodeficiency virus in women: experiences from KwaZulu-Natal, South Africa. Journal of the American Medical Women's Association. 2001; 56:193–196.

Basch CE. Focus group interview: an underutilized research technique for improving theory and practice in health education. Health Education Quarterly. 1987; 14:411–448. [PubMed: 3319971]

Bell J. Why embarrassment inhibits the acquisition and use of condoms: A qualitative approach to understanding risky sexual behaviour. Journal of Adolescence. 2009; 32:379–391. [PubMed: 18691747]

Béné C, Merten S. Women and Fish-for-Sex: Transactional Sex, HIV/AIDS and Gender in African Fisheries. World Development. 2008; 36:875–899.

Bwambale F, Ssali S, Byaruhanga S, et al. Voluntary HIV counselling and testing among men in rural western Uganda: Implications for HIV prevention. BMC Public Health. 2008; 8:263. [PubMed: 18664301]

Cornman DH, Christie S, Shepherd LM, et al. Counsellor-delivered HIV risk reduction intervention addresses safer sex barriers of people living with HIV in KwaZulu-Natal, South Africa. Psychology & Health. 2011; 26:1623–1641. [PubMed: 21745150]

Dunkle KL, Jewkes RK, Brown HC, et al. Transactional sex among women in Soweto, South Africa: prevalence, risk factors and association with HIV infection. Social Science & Medicine. 2004; 59:1581–1592. [PubMed: 15279917]

Fanta W, Worku A. Determinants for refusal of HIV testing among women attending for antenatal care in Gambella Region, Ethiopia. Reproductive Health. 2012; 9:8. [PubMed: 22834566]

Feuer C. Can PEPFAR save the most vulnerable? amfAR Global Link: HIV/AIDS Treatment Insider. 2004; 5

Fisher JD, Cornman DH, Osborn CY, et al. Clinician-Initiated HIV Risk Reduction Intervention for HIV-Positive Persons: Formative Research, Acceptability, and Fidelity of the Options Project. Journal of Acquired Immune Deficiency Syndromes. 2004; 37:S78–S87. [PubMed: 15385903]

Fisher JD, Fisher WA. Changing AIDS-risk behavior. Psychological Bulletin. 1992; 111:455–474. [PubMed: 1594721]

Fisher, JD.; Fisher, WA. Theoretical Approaches to Individual-Level Change in HIV Risk Behavior. In: Peterson, JL.; DiClemente, RJ., editors. HIV Prevention Handbook. New York: Kluwer Academic; 2000. p. 3-55.

Gage AJ, Ali D. Factors associated with self-reported HIV testing among men in Uganda. AIDS Care. 2005; 17:153–165. [PubMed: 15763711]

Gupta, GR. Gender, Sexuality, and HIV/AIDS: The What, the Why, and the How. XIII International AIDS Conference; Durban, South Africa. 2000.

Hogle, JE.; Green, C.; Nantulya, V., et al. Behavior Change, and the National Response. Washington DC: US Agency for International Development, Office of HIV/AIDS, Bureau of Global Health; 2002. What Happened in Uganda? Declining HIV Prevalence.

Kalichman SC, Simbayi LC. HIV testing attitudes, AIDS stigma, and voluntary HIV counselling and testing in a black township in Cape Town, South Africa. Sexually Transmitted Infections. 2003; 79:442–447. [PubMed: 14663117]

Kiene SM, Bateganya M, Wanyenze R, et al. Initial outcomes of provider-initiated routine HIV testing and counseling during outpatient care at a rural Ugandan hospital: risky sexual behavior, partner HIV testing, disclosure, and HIV care seeking. AIDS Patient Care and STDS. 2010; 24:117–126. [PubMed: 20059356]

Kirby D. Changes in sexual behaviour leading to the decline in the prevalence of HIV in Uganda: confirmation from multiple sources of evidence. Sexually Transmitted Infections. 2008; 84(Suppl 2):ii35–41. [PubMed: 18799490]

Mbonu NC, van den Borne B, De Vries NK. Stigma of People with HIV/AIDS in Sub-Saharan Africa: A Literature Review. Journal of Tropical Medicine. 2009; 2009:145891. [PubMed: 20309417]

Medley A, Garcia-Moreno C, McGill S, et al. Rates, barriers and outcomes of HIV serostatus disclosure among women in developing countries: implications for prevention of mother-to-child transmission programmes. Bulletin of the World Health Organization. 2004; 82:299–307. [PubMed: 15259260]

Merson M. Uganda's HIV/AIDS Epidemic: Guest Editorial. AIDS and Behavior. 2006; 10:333–334.

Mirembe R, Davies L. Is Schooling a Risk? Gender, Power Relations, and School Culture in Uganda. Gender and Education. 2001; 13:401–416.

Muller O, Barugahare L, Schwartlander B, et al. HIV prevalence, attitudes and behaviour in clients of a confidential HIV testing and counselling centre in Uganda. AIDS. 1992; 6:869–874. [PubMed: 1418784]

Mumtaz, Z.; Slaymaker, E.; Salway, S. Condom Use in Uganda and Zimbabwe: Exploring the Influence of Gendered Access to Resources and Couple-Level Dynamics in a Focus on Gender: Collected Papers using DHS Data. Calverton, Maryland, USA: ORC Macro; 2005.

Nakanjako D, Kamya M, Daniel K, et al. Acceptance of routine testing for HIV among adult patients at the medical emergency unit at a national referral hospital in Kampala, Uganda. AIDS and Behavior. 2007; 11:753–758. [PubMed: 17096199]

Nguyen HV, Dunne MP, Debattista J. Predictors of recent HIV testing among male street laborers in urban Vietnam. Journal of Health Psychology. 2013 Epub ahead of print 16 May 2013. 10.1177/1359105313483645

Nyanzi S, Nyanzi B, Kalina B, et al. Mobility, sexual networks and exchange among bodabodamen in southwest Uganda. Culture, Health, and Sexuality. 2004; 6:239–254.

Nyembezi A, Funani I, Sifunda S, et al. The psychosocial determinants of the intention to reduce the number of sexual partners among recent traditionally initiated and circumcized men in the Eastern Cape Province, South Africa. Journal of Health Psychology. 2012; 17:664–675. [PubMed: 22044915]

Parker RG, Easton D, Klein CH. Structural barriers and facilitators in HIV prevention: a review of international research. AIDS. 2000; 14(Suppl 1):S22–32. [PubMed: 10981471]

Phakathi Z, Van Rooyen H, Fritz K, et al. The influence of antiretroviral treatment on willingness to test: a qualitative study in rural KwaZulu-Natal, South Africa. African Journal of AIDS Research. 2011; 10:173–180.

Plumb EJ. Uganda and the current HIV treatment crisis - A perspsective. Health Policy Newsletter. 2011; 24

Sales JM, Lang DL, DiClemente RJ, et al. The mediating role of partner communication frequency on condom use among African American adolescent females participating in an HIV prevention intervention. Health Psychology. 2012; 31:63–69. [PubMed: 21843001]

Simbayi LC, Kalichman SC, Jooste S, et al. Risk factors for HIV-AIDS among youth in Cape Town, South Africa. AIDS Behavior. 2005; 9:53–61. [PubMed: 15812613]

Smith, CP. Content Analysis and Narrative Analysis. In: RHT; JCM, editors. Handbook of Research Methods in Social and Personality Psychology. New York: Cambridge University Press; 2000. p. 313-335.

Tomlinson M, Rohleder P, Swartz L, et al. Broadening psychology's contribution to addressing issues of HIV/AIDS, poverty and nutrition: Structural issues as constraints and opportunities. Journal of Health Psychology. 2010; 15:972–981. [PubMed: 20631038]

UNAIDS. AIDS Epidemic Update. Geneva, Switzerland: UNAIDS; 2010.

Weiser SD, Heisler M, Leiter K, et al. Routine HIV Testing in Botswana: A Population-Based Study on Attitudes, Practices, and Human Rights Concerns. PLoS Medicine. 2006; 3:e261. [PubMed: 16834458]

Zablotska IB, Gray RH, Serwadda D, et al. Alcohol use before sex and HIV acquisition: a longitudinal study in Rakai, Uganda. AIDS. 2006; 20:1191–1196. 1110.1097/1101.aids.0000226960.0000225589.0000226972. [PubMed: 16691071]

Table 1

Barriers and strengths to PITC acceptability by Informational-Motivational-Behavioral Skill (IMB) model of prevention behavior

	Information	**Motivation**	**Behavioural Skills**	**Structural/Community-level/Other**
Barriers to PITC	• Misinformation about HIV testing – HIV testing uses a lot of blood – The HIV test cannot be accurate due to the small size of the testing kit itself • Lack of knowledge HIV treatment – Lack of knowledge on the availability of free ARVs – Lack of knowledge regarding the ability to live a healthy, long life on HIV treatment • Inaccurate assumptions about one's HIV status – People assume they are positive based on the HIV positive status, illness, or death of a partner, as well as their own sexual history.	• Fear of positive test results – Perceived vulnerability related to one's own mortality – Perceived negative outcomes of disclosing one's status to a partner ♦ Separation or conflict ♦ Being accused of infidelity and blamed for HIV (women) • Gender differences in accessing care – Women test and come to the clinic more than men • Normative barriers to discussing matters regarding one's sexual behaviour – Unacceptable to discuss in public or outside of one's relationship – Especially regarding socially deviant sexual behaviour, such as infidelity. • Fear of feeling judgment from the counsellor	• Poor coping skills related to test results – "Some people are afraid of testing because they can commit suicide in case their HIV results are positive" (32 year old female). • Communication deficits – Discussions with counsellors ♦ "We know that such issues are private [discussing sexual behaviour with the counsellor] we can't just talk about them in public" (52 year old male). – Discussions with partners (especially women) ♦ Difficulty expressed in discussing the topic of testing, convincing their partner to test, disclosing their status, and discussing sex with one's partner	• Concerns about confidentiality – "Some counsellors don't keep patients secrets" (21 year old female). • HIV-related stigma – People fear being labelled HIV positive by others if seen at the clinic. ♦ "People are afraid of coming for HIV testing because if they are found HIV positive, they won't be able to come for HIV drugs because drugs are given in public" (39 year old male). • Barriers related to resource-limited healthcare facilities (staff) – Limited facility resources and space – Lack of human resource – Limited time for counselling – Need for more counselling training

	Information	**Motivation**	**Behavioural Skills**	**Structural/Community-level/Other**
Strengths about PITC	• Understanding of the benefits of PITC "Some of them [patients] are interested in testing to know their HIV status and make a decision on how to start medication" (32 year old female). • Understanding the benefits of disclosure – "To me it is very good to disclose your HIV results to your partner because this can influence your partner also to go for an HIV test" (21 year old female). • Understanding the benefits of couples testing	• Positive attitudes towards testing – Before a new relationship – When getting married – As a requirement for hospital care • Staff comfortable counselling patients one-on-one • Trust in counsellors leads to comfort in counselling – Participants who believed counsellors to be knowledgeable and able to help them were willing to have open discussions	• Ability to disclose HIV negative results to one's partner • Women's ability to devise strategies to encourage partner testing – "I think that what we can do is to bring children to hospital for HIV test…and show HIV card to the husband [so] that he is also called to the hospital to have his blood tested" (21 year old married female).	• Willing to test in more confidential settings • Trust in counsellors that are mature, friendly, and keep confidentiality

Table 2

Suggestions for improving counselling during PITC

	Information	Motivation	Behavioural Skills	Structural/Community-level/Other
Suggestions for improving counselling during PITC	• General information on HIV prevention during PITC – "Sensitizing them [on] how people get HIV [and] how to protect themselves from getting HIV [and] the sexually transmitted diseases" (39 year old male). • Information on the availability of ARVs • Information on the potential to live a healthy life on ARV treatment	• Targeting men in counselling sessions – More effective because men have greater decision making power in relationships (staff) – Include men who accompany women to the clinic and tailor content to men (staff) ♦ "They [the counsellors] should help us have our husbands tested for HIV" (28 year old married female).	• Skills to cope with a positive test result • Skills to improve partner communication	• PITC protocol/structural suggestions – Access to female condoms – Male condom distribution – Separate, private space for PITC and ARV distribution • PITC counselling suggestions – Support for client-centered approach (staff) ♦ "You need it to come from themselves; let them plan and they will own the whole process" (female counsellor). – Option for couples PITC – Counsellor training needs ♦ Confidentiality ♦ A non-judgmental approach ♦ Initiating conversations about sex – Support for peer educators (staff) ♦ Reduce staff burden ♦ Relate well to patients

Table 3

Barriers and strengths related to HIV prevention behaviours by Informational-Motivational-Behavioral Skill (IMB) model of prevention behavior

	Information	**Motivation**	**Behavioural Skills**	**Structural/Community-level/Other**
Barriers to HIV prevention behaviours	• Misinformation about discordant couples – "It is impossible for one partner to be HIV positive and another partner HIV negative" (38 year old male). • Misconceptions regarding condom use – Condoms cause discomfort and pain (women) – Condoms cause cancer – Condoms can be left inside women after intercourse • Misconceptions regarding circumcision – People who are circumcised engage in more sexual risk, "thinking that they will not get HIV because they are circumcised" (40 year old male). • People living with HIV purposely engage in unsafe sex because they want to, "make sure they spread the virus to other people intentionally" (26 year old female).	• Negative attitudes towards condom use – Reduced sexual pleasure (men) ♦ Condom use is like "eating a sweet with its wrapper" or "eating a banana with its peel" (47 year old male). – Discomfort and pain and decreased sexual pleasure (women) – More acceptable for use with extramarital partners ♦ Difficulty using long-term ♦ Desire for children	• Lack of objective condom use skills – Female condoms – Remarks on reduced sexual pleasure, pain, and discomfort suggestive of deficits in proper male condom use. • Difficulty buying condoms in public – People feel "shy to ask for them" (21 year old female). • Partner communication deficits (especially women) – Regarding condom use, women's ability to refuse sex with her husband, disclosing one's status, making a prevention plan, and going for couples HIV-testing. • Difficulty resisting social norms regarding sexual behaviour and gender roles – Difficulty resisting peer pressure (men) ♦ Peers can influence one "to get a partner or more partners" (68 year old married male). – Difficulty resisting sexual urges (men)	• Drinking alcohol during sex • Lack of access to female condoms • HIV-stigma • Differences in prevention behaviours by age • Men's mobility as a barrier to monogamy • Gender inequity – Male control over condom use – Financial dependence on men ♦ Women are unable to refuse sex with husband for fear of losing support ♦ Women engage in transactional sex for economic support • Even less control over condom use when men have paid. – Social norms prohibiting women to refuse sex with her husband • Cultural and social norms about sexual behaviour – Multiple partners and barriers to abstinence (men) ♦ It is men's nature to desire many women ♦ It is "prestigious to have more than one woman" (18 year old single female) – Stigma-related to unmarried women and women without children • Religion as a prevention barrier – Religious groups' opposition to condoms – Circumcision viewed as a religious practice ♦ Many do "not want to be circumcised thinking that they are promoting [the] Muslim religion" (30 year old male). • Risky tribal practices – Women getting married expected to have sex with father- in-law

	Information	Motivation	Behavioural Skills	Structural/Community-level/Other
				– A woman can be “free to engage in sex with all my brothers because it is part of our culture” (28 year old male).
Strengths about HIV prevention behaviours	• Understanding of the protective effects of prevention behaviours on HIV acquisition – Condom use and being faithful most cited – Women identified the delay or avoidance of marriage as a way to reduce HIV risk ♦ “If a woman decided not to get married…it can prevent her from getting HIV” (21 year old married female).	• Overall positive views towards prevention behaviours – “It is good when you are circumcised; you don’t easily get sexually transmitted diseases” (38 year old male). – “I don’t have any problem with a condom and my partner is so much interested in using it” (21 year old female). • Women interested in female condoms • Ability to disassociate circumcision as a religious issue, and see that it “make [you] clean” (35 year old female).	• Women’s ability to suggest condom use in ways that may be more acceptable	