Published in final edited form as:

AIDS Care. 2019 April ; 31(4): 443–450. doi:10.1080/09540121.2018.1500009.

Women's Role in Male Circumcision Promotion in Rakai, Uganda

Neema Nakyanjo^a, Danielle Piccinini^b, Alice Kisakye^c, Ping Teresa Yeh^d, William Ddaaki^a, Godfrey Kigozi^e, Ronald H. Gray^f, and Caitlin E. Kennedy^d

^aRakai Health Sciences Program, Research Directorate, Social and Behavioral Sciences Department, Kalisizo, Uganda ^bJohns Hopkins Bloomberg School of Public Health, Center for Communications Programs, Baltimore, MD, USA ^cRakai Health Sciences Program, Programs Directorate, Kalisizo, Uganda ^dJohns Hopkins Bloomberg School of Public Health, Department of International Health, Social and Behavioral Interventions Program, Baltimore, MD, USA ^eRakai Health Sciences Program, Research Directorate, Kalisizo, Uganda ^fJohns Hopkins Bloomberg School of Public Health, Department of Epidemiology, Baltimore, MD, USA

Abstract

Medical male circumcision (MMC) has expanded in sub-Saharan Africa, yet uptake remains sub-optimal. We sought to understand women's perceptions of and influence on MMC in Rakai, Uganda. We conducted in-depth interviews with 27 women in fishing and trading communities, including women married to circumcised and uncircumcised men, single women, and sex workers. Data analysis followed a team-based framework approach. All female participants preferred circumcised men because of perceived reduced HIV and sexually transmitted infection (STI) risk, improved penile hygiene, and increased sexual pleasure. Perceived negative aspects included abstinence during wound healing, potentially increased male sexual risk behaviors, fear of being blamed for HIV acquisition, and economic insecurity due to time off work. Participants felt women could persuade their partners to be circumcised, accompany them to the clinic, refuse sex with uncircumcised men, and participate in community MMC activities. Findings support women's important role in MMC acceptance.

Keywords

male circumcision; women's attitudes; qualitative study

Introduction

Medical male circumcision (MMC) has expanded rapidly in sub-Saharan Africa, yet uptake remains sub-optimal in many settings. (Joint United Nations Programme on HIV/AIDS, 2016; Maibvise & Mavundla, 2014; Uganda AIDS Commission, 2015) Recently, attention has focused on the role of women in male circumcision programs. (Lilleston, Marcell, Nakyanjo, Leonard, & Wawer, 2017; Mati, Adegoke, & Salihu, 2016; Osaki et al., 2015;

Corresponding author: Ms. Neema Nakyanjo, Head, Social and Behavioral Sciences Department, Research Directorate, Rakai Health Sciences Program, P.O. Box 279, Kalisizo, Uganda., Tel: + 256 200 900384/ +256 382 4000101, Fax: +256 382 400002, neema@rhsp.org.

Semeere et al., 2016) Evidence suggests that women are not directly protected against HIV when their partners are circumcised, although they receive indirect protection if male HIV prevalence is reduced due to circumcision, and that female partners of HIV-positive men who are circumcised may actually be at greater risk of HIV acquisition if sexual intercourse resumes before complete wound healing.(Wawer et al., 2009) Consultations held in preparation for male circumcision scale-up in 2007–2008 articulated the need for research to better understand the implications of MMC for women and to minimize potential risk.(AIDS Vaccine Advocacy Coalition: Global Advocacy for HIV Prevention, 2008; Kim, 2008; UNAIDS/CAPRISA, 2007) Recent studies have also called for a gender perspective in qualitative research on MMC in sub-Saharan Africa.(Martinez Perez, Trivino Duran, Gasch, & Desmond, 2015)

Women's knowledge about MMC varies widely. In studies conducted in Botswana, Namibia, Swaziland, Zambia, and South Africa, 59–90% of women knew that MMC provided partial protection against HIV, 23–70% knew to abstain from sex for six weeks post-procedure, and 14–30% believed it was acceptable for a circumcised man to expect condomless sex.(Andersson & Cockcroft, 2012; Haberland, Kelly, Mulenga, Mensch, & Hewett, 2016; Lanham, L'Engle K, Loolpapit, & Oguma, 2012; Mantell et al., 2013; Maraux et al., 2017; Mugwanya et al., 2010; Plank et al., 2010; Wilcken, Miro-Nakayima, Hizaamu, Keil, & Balaba-Byansi, 2010) In qualitative studies from Kenya, Zambia, and Tanzania, women said they were willing and able to influence men to get circumcised.(Layser et al., 2014a; Riess, Achieng, & Bailey, 2014) In Zimbabwe, 14% of men cited lack of partner support as a major barrier to MMC, especially among older married men who were concerned about fidelity, relationship trust, and the six-week post-surgery abstinence period.(Hatzold et al., 2014) In Zambia, partner support and discussion increased men's readiness to undergo MMC;(Jones et al., 2014) the Spear and Shield project showed that female partners' acceptance of MMC increased men's likelihood to get circumcised.(Cook et al., 2016)

Uganda has scaled up MMC, reaching 50% of its target by 2015.(Joint United Nations Programme on HIV/AIDS, 2016) With PEPFAR support, the Rakai Health Sciences Program (RHSP) in rural Rakai district, Uganda, has performed over 100,000 MMCs, and MMC prevalence among men in Rakai increased from 14% to 69% between 2004 and 2014. New demand generation strategies are being developed, using peer influence (e.g. sports-based programs) or financial compensation for transport or opportunity cost.(Djimeu & Brown, 2016; Sgaier et al., 2016; Wilson, Frade, Rech, & Friedman, 2016) A partner-based pilot intervention had pregnant women engage their spouses in MMC discussions.(Semeere et al., 2016) Although qualitative studies have been conducted among men,(Ssekubugu et al., 2013) little qualitative research has explored women's role in MMC promotion. The goal of this study was to understand women's perceptions of male circumcision and their role in influencing men's decisions to get circumcised.

Methods

We conducted a qualitative research study in Rakai District from August-September 2015 in fishing communities and main-road trading communities, where HIV prevalence is higher than in agricultural communities.(Chang et al., 2016)

In total, we conducted 27 in-depth interviews [Table 1]. Participants were purposively selected from individuals who had previously participated in the Rakai Community Cohort Study (RCCS)(Chang et al., 2016) and had agreed to be re-contacted for future studies. We followed a criterion-based sampling approach, where we purposefully selected women in different types of relationships relevant to the study topic, specifically: married women (further divided into those with circumcised versus uncircumcised husbands), single women, and women working in bars and/or as sex workers. Only women married to non-Muslim partners were included, since Muslim men circumcised in childhood are not MMC candidates. Married women's partners' circumcision status was initially identified through the most recent RCCS data, but then verbally re-confirmed immediately prior to the qualitative interview. Bar girls/sex workers were oversampled because they were able to provide information on both clients and their primary partners. While not all bar girls in these communities also earn money through sex work, the majority do because they are dependent on this source of income. During our interviews, we asked women in this group about their interactions with clients; the ensuing discussions indicated that they were working as sex workers. Within each group of women, we aimed for approximately equal distribution between fishing and trading communities. We then used convenience sampling to select individuals who met these criteria and had recently completed the RCCS.

Data were collected by experienced, trained research assistants. Using RCCS-generated lists, research assistants approached potential participants, invited them to participate in the study and obtained written informed consent from each. Interviews were conducted in private and lasted 60–90 minutes. Interviewers took notes, and all interviews were audio-recorded, with participants' permission. Interviews were conducted in Luganda, the local language, then transcribed and translated into English by the same research assistants, generally within 24 hours.

A semi-structured guide was used to focus discussion on topics of interest, including women's knowledge about and source of information on MMC and STIs; attitudes and preferences or concerns about MMC; women's role in influencing men's decision to get circumcised; and participants' recommendations on how women can promote MMC.

Data analysis

Data analysis followed a modified framework approach.(Ritchie & Spencer, 2003) Two members of the study team (NN and DP) first read through the transcripts and each prepared a list of identified key themes and subthemes which were discussed with CK to jointly develop a final list of key themes to create a matrix frame. Two members of the research team (NN and DP) then read each transcript and summarized the themes into the matrix table, including relevant quotations. Finally, matrices for each interview were summarized

by theme and compared across groups. These thematic summaries were discussed and developed into the analysis presented here.

Ethical considerations

This study was approved by the Uganda Virus Research Institute (UVRI)'s Research and Ethical Committee (REC), the Uganda National Council for Science and Technology (UNCST) and Johns Hopkins Bloomberg School of Public Health IRB. Participants provided written informed consent.

Results

We present our findings below by five key themes: (i) women's preferences about circumcision, (ii) positive aspects of circumcision for women, (iii) negative aspects of circumcision for women, (iv) women's role, experiences, and recommendations about circumcision, and (v) circumcision and condom use.

Women's preferences about circumcision

All 27 participants said they preferred circumcised to uncircumcised men, including women married to uncircumcised men. *"A man who is not circumcised is not modern,"* said a 33-year-old married woman, a perspective echoed by many participants. Women explained that circumcised men were stylish and modern because the act of getting circumcised implies that a man cares about both his own and his female partner's health, since circumcision reduces the risk of HIV and STIs. They said female partners are more relaxed during sex with circumcised men because they are less worried about contracting infections. They felt circumcision was more physically attractive because it facilitated sexual pleasure for both partners and led to better penile hygiene and more hygienic sex. One sex worker said:

We [sex workers] just share experiences and they say that a circumcised man is the best. It is just that we don't have the power to drag them [uncircumcised men] and take them to get circumcised. (28-year-old sex worker)

Positive aspects of MMC for women

Reduced risk of HIV and STIs—All participants said that a positive aspect of MMC for women was the female partner's reduced risk of HIV and STIs. This was attributed largely to the removal of the foreskin which would otherwise increase the chances of males contracting HIV/STIs, in turn exposing their female partners to infection.

It's good he is circumcised. He will not bring a lot of infections to me because he has high chances of not acquiring them from his other sexual partners. He will not collect for you diseases like syphilis. (34-year old married woman)

Improved penile hygiene—Women also said that the foreskin retains "dirt" and that circumcision made it easier for the man to clean himself. Also, some women believed that ulcers due to HIV and STIs "hide" beneath the foreskin, so when a woman has sex with a circumcised man, she feels secure since she can see her partner has no "dirt" or ulcers.

Improved sexual desire and pleasure—Many women felt that circumcision increased sexual desire and pleasure for both partners due to smooth, easy penetration and improved men's sexual prowess with prolonged and more frequent sexual encounters. However, one 45-year-old woman said she felt no difference in sexual pleasure after her husband's circumcision.

Negative aspects of MMC for women

Behavioral disinhibition—Some participants, particularly those married to uncircumcised men, were concerned that circumcision would lead to riskier male sexual behaviors. These women stated that circumcised men often experienced increased sexual desire leading them to seek extra-marital relationships which could put them and their partners at risk of HIV/STIs. Additionally, some participants thought circumcision could lead men to engage in extra-marital relationships if they thought they had lower risk of HIV infection.

Wound healing period and sexual abstinence—Most participants believed sexual abstinence during wound healing lasted longer than the recommended six weeks. Some women felt this was a burden, especially for married couples. Women said some couples engaged in sex before complete wound healing due to the female partner's impatience. Participants said that some men who would have abstained until the wound had healed gave in to their wives' desire for intercourse because they feared that their wives might be tempted to have sex with other men.

A few participants claimed that unlike men, women can wait to resume intercourse without becoming unfaithful. However, they felt that younger women might be more impatient than older women.

Blame game—Many participants were concerned about the potential for a "blame game" if an HIV-negative man gets circumcised but acquires HIV. They felt that the man would blame the woman for infection. One explained:

You know the men misunderstand everything. They think that when they get circumcised they will never get it [HIV] and that will compel him to sleep around knowing that, "...Ah, I will never get HIV." Then someday he will go for testing and when he finds out that he is positive he will blame the wife." (30-year-old married woman)

Participants felt this could result in domestic violence or separation.

Time off work—Some participants, especially those from fishing communities, were concerned about time off work and loss of income. Participants worried that, if a man had to take time off work after MMC, it would adversely affect his family's finances. Participants also said that many fishermen are employed by boat owners or managers who would not allow them to take time off work.

Women's role, experiences, and recommendations about circumcision

All participants acknowledged women's positive role in promotion of MMC and provided recommendations of how women can promote MMC.

Talk and convince—Participants felt that women's major role was to talk to their partners and convince them to undergo MMC. They said it was important for women to talk nicely and politely to their partners about circumcision's advantages. Men rarely attend health education and sensitization meetings, whereas women usually attend such sessions and could pass on this information to their partners. They cautioned, however, that women not be coercive, because men might react unfavorably. Participants suggested that the best time for women to introduce the topic was when the couple was in the bedroom "resting".

Almost all participants married to circumcised men said they had contributed to their partners' decision to be circumcised. One described her story this way:

For him to accept to go for circumcision, it was because of me. I used to keep telling him to go get circumcised. I told him that "when a man gets circumcised, he does not easily get STDs and I know that you cannot forego having sex with other sexual partners". He kept holding back. One time he told me that, "I have gone for circumcision." When he came back, he told me that "When I arrived, I was scared. Secondly, there were many people." Two days passed and he then said, "Okay let me go for circumcision". (38-year-old married woman)

Other married women described how they "*sat down and discussed*" circumcision with their husbands. Sex workers likewise described influencing men, mostly their clients, to be circumcised. One noted,

Like us [sex workers], we tend to meet [have sex with] different men. So when you meet a circumcised man and then you also meet uncircumcised man, if your partner is not circumcised, you advise him to go for circumcision based on what you found in a circumcised man. (33-year-old sex worker)

However, some participants noted that convincing male partners could be challenging, and some women married to uncircumcised men described unsuccessful attempts to convince their partners to get circumcised. One 25-year-old participant said, "*When I told him to go and get circumcised, he told me, 'I am already infected.'*" Another described how she convinced her husband to get circumcised, but his uncircumcised male friends discouraged him, saying that he would get sepsis or experience pain. Many participants, both with circumcised and uncircumcised partners, said that fear of pain was a major reason why men refuse circumcision. One participant reported that her husband felt uncomfortable and shy at the thought of his sons knowing that their father was circumcised.

Some participants described how they had tried to convince male friends, relatives, and in-laws to get circumcised. Some sex workers reported sharing experiences with other sex workers about circumcised versus uncircumcised clients, leading them to influence clients to get circumcised. Another participant described how she had convinced her male neighbor, who wanted to marry her friend, to get circumcised before the marriage. Others noted that women could encourage their female friends with uncircumcised partners to discuss MMC.

However, there was general agreement that social norms made it difficult for women to raise the issue of circumcision with men other than their husbands, long-term partners, brothers, or sons.

Accompany partners to clinics—Some participants recommended that women accompany their partners to MMC clinics and jointly participate in counselling sessions. One woman noted that couples counselling would enable both partners to understand the importance of abstaining from sex during the healing period. However, one participant felt that the woman's presence might make her partner uncomfortable if he experienced painful erections after the procedure.

Withhold sex—Some participants recommended that female partners threaten to or actually abstain from sex with uncircumcised partners. This was mostly suggested by sex workers, some of whom said they had refused sex with uncircumcised clients, just as they commonly deny sex with clients who refuse to use condoms. More lenient sex workers said they would have sex with uncircumcised men but warn them that the next time they came, they should be circumcised. One sex worker said she accepted sex with uncircumcised clients just for the money, but uncircumcised clients disgusted her. Participants reported that some men end up getting circumcised out of fear of being scorned or ridiculed by female partners, especially sex workers. However, one participant warned that withholding sex might not work since "*he can always look for other women to satisfy his need*". There was also some fear of violence if men were denied sex.

Participate actively—All participants supported the active involvement of women in MMC promotion. These included women participating in MMC/health education sessions, communication messages, games, music, dance, drama, and open discussions about MMC.

Circumcision and condom use

All participants emphasized the HIV prevention benefits of condoms, without the interviewers raising this topic. Participants argued that condom use was important after circumcision to prevent STIs like gonorrhea. Many participants, especially sex workers, said they often used condoms. When asked about the difference between a circumcised and uncircumcised man during sex, many sex workers said they felt no difference since they consistently used condoms with clients. Sex workers also said that many circumcised men did not want to use condoms because of the false belief that they were fully protected against HIV.

Participants recommended further community sensitization about condoms use after circumcision. They also suggested that sex workers insist on condom use with male clients regardless of their circumcision status and advise other sex workers to refuse condomless sex.

We try to advise our colleagues, especially those who have not contracted HIV. We tell them that if you have gotten a partner, even if circumcised, try to use a condom such that you do not get HIV. (33-year-old sex worker)

Discussion

In Rakai, women perceive circumcision as stylish and modern. They generally feel that the benefits of improved sexual pleasure, improved penile hygiene, and reduced risk of HIV/STI infections outweigh the negative aspects like abstinence during wound healing, loss of financial support during a man's time off work, potential blame for HIV/STIs, and potential male behavioral disinhibition. Across our diverse sample of participants, we found that all participants thought circumcision was a good thing. Women described trying to convince their partners and other male family members and neighbors to get circumcised, though not always successfully, and they provided multiple suggestions for engaging women in supporting MMC.

Our findings are consistent with other research in sub-Saharan Africa suggesting that many women approve of and/or prefer circumcision,(Ikwegbue, Ross, & Ogbonnaya, 2015; Lanham et al., 2012; Layer et al., 2013; Plotkin et al., 2013; Riess et al., 2014) that approval is related to perceived sexual benefits for women as well as men,(Ikwegbue et al., 2015; Layer et al., 2013; Plotkin et al., 2013; Riess et al., 2014) and that women are currently engaged (and willing to be further engaged) in convincing their partners to be circumcised. (Lanham et al., 2012; Layer et al., 2014b; Osaki et al., 2015; Riess et al., 2014) Similarly, concerns that MMC may increase risk behavior among some men have been documented elsewhere,(Ikwegbue et al., 2015; Layer et al., 2014b; Osaki et al., 2015) though studies of men who have undergone MMC have generally not found deleterious behavioral changes following circumcision.(Auvert et al., 2013; Kagaayi et al., 2016; Kong et al., 2012; Westercamp, Agot, Jaoko, & Bailey, 2014) Concerns about blame-shifting and abuse associated with HIV infection have also been described previously.(Burke et al., 2017; Colombini, James, Ndwiga, & Mayhew, 2016; Mulrenan, Colombini, Howard, Kikuvu, & Mayhew, 2015; Nabaitu, Bachengana, & Seeley, 1994; Ninan, 2003; Quinn et al., 2018)

One strength of this study was our inclusion of sex workers, who have only been assessed in one Zambian study of MMC.(Abbott, Haberland, Mulenga, & Hewett, 2013) In that study, Zambian female sex workers were more skeptical than sex workers in our study about the efficacy of MMC, though participants held similar views about improved penile hygiene and the continued importance of condom use. Our findings do not indicate how often sex workers refuse clients due to lack of circumcision, and our interviews did not go into detail about how such refusals occur in practice. However, sex workers' general positive perspective on MMC and open attitude toward discussing MMC in the context of their work suggest that they may be an important but overlooked group for MMC promotion.

While women across all groups claimed to prefer circumcised men, women married to uncircumcised men expressed greater concerns about behavioral disinhibition, while sex workers were the main group advocating refusal of sex with uncircumcised men. These findings echo those of a Tanzanian study, which found that refusal of sex was discussed only in relation to casual partnerships, and that married women were most concerned that circumcision might indicate a man's interest in extra-marital partnerships.(Osaki et al., 2015) In our study, discussions about time off work and loss of income tended to focus on the impact on wives. It is also clear how difficult it is for women to influence or bring up the

topic on MMC with men other than partners, clients, sons, and other family members or neighbors. Furthermore, we noted that women in fishing communities cited lost financial support as a particularly salient barrier. These findings suggest MMC messaging could be tailored to different subgroups of women, such as married women, sex workers, or women in fishing communities.

One potential limitation of this study is social desirability bias. Participants knew that interviewers worked with RHSP, which is known to provide circumcision services. However, previous qualitative research on MMC in Rakai documented more negative perceptions, (Ssekubugu et al., 2013) indicating that people are willing to share negative opinions, even to RHSP staff.

Our findings add to the evidence suggesting that women can influence men's MMC decisions and may help promote MMC. Evaluation will be needed to assess the effectiveness of outreach to women.(Curran, 2014)

References

- Abbott SA, Haberland NA, Mulenga DM, & Hewett PC (2013). Female sex workers, male circumcision and HIV: a qualitative study of their understanding, experience, and HIV risk in Zambia. *PLoS One*, 8(1), e53809. doi: 10.1371/journal.pone.0053809 [PubMed: 23349745]
- AIDS Vaccine Advocacy Coalition: Global Advocacy for HIV Prevention. (2008). Meeting Report: Civil society dialogue on male circumcision for HIV prevention: Implications for women Mombasa, Kenya <https://www.malecircumcision.org/resource/meeting-report-civil-society-dialogue-male-circumcision-hiv-prevention-implications-women>.
- Andersson N, & Cockcroft A (2012). Male circumcision, attitudes to HIV prevention and HIV status: a cross-sectional study in Botswana, Namibia and Swaziland. *AIDS Care*, 24(3), 301–309. doi: 10.1080/09540121.2011.608793 [PubMed: 21933035]
- Auvert B, Taljaard D, Rech D, Lissouba P, Singh B, Bouscaillou J, . . . Lewis D (2013). Association of the ANRS-12126 Male Circumcision Project with HIV Levels among Men in a South African Township: Evaluation of Effectiveness using Cross-sectional Surveys. *PLOS Medicine*, 10(9), e1001509. doi: 10.1371/journal.pmed.1001509 [PubMed: 24019763]
- Burke V, Nakyanjo N, Ddaaki W, Payne C, Hutchinson N, Wawer MJ, . . . Kennedy CE (2017). HIV self-testing values and preferences among sex workers, fishermen, and mainland community members in Rakai, Uganda: a qualitative study. *PLoS One*, 12(8), e0183280 [PubMed: 28813527]
- Chang LW, Grabowski MK, Ssekubugu R, Nalugoda F, Kigozi G, Nantume B, . . . Wawer MJ (2016). Heterogeneity of the HIV epidemic in agrarian, trading, and fishing communities in Rakai, Uganda: an observational epidemiological study. *Lancet HIV*, 3(8), e388–396. doi: 10.1016/S2352-3018(16)30034-0 [PubMed: 27470029]
- Colombini M, James C, Ndwiga C, & Mayhew SH (2016). The risks of partner violence following HIV status disclosure, and health service responses: narratives of women attending reproductive health services in Kenya. *J Int AIDS Soc*, 19(1), 20766. doi: 10.7448/ias.19.1.20766 [PubMed: 27037140]
- Cook R, Jones D, Redding CA, Zulu R, Chitalu N, & Weiss SM (2016). Female Partner Acceptance as a Predictor of Men's Readiness to Undergo Voluntary Medical Male Circumcision in Zambia: The Spear and Shield Project. *AIDS Behav*, 20(11), 2503–2513. doi: 10.1007/s10461-015-1079-x [PubMed: 25931242]
- Curran K (2014). Women's knowledge, attitudes, practice and experience regarding VMMC and EIMC in priority countries: what do we know? Women and Voluntary Medical Male Circumcision. Webinar on 11/19/2014: Health Communication Capacity Collaborative.

- Djimeu EW, & Brown AN (2016). Strength of Evidence on Demand Creation for Voluntary Medical Male Circumcision From 7 Impact Evaluations in Southern and Eastern Africa. *J Acquir Immune Defic Syndr*, 72 Suppl 4, S321–s325. doi: 10.1097/qai.0000000000001161 [PubMed: 27749599]
- Haberland NA, Kelly CA, Mulenga DM, Mensch BS, & Hewett PC (2016). Women's Perceptions and Misperceptions of Male Circumcision: A Mixed Methods Study in Zambia. *PLoS One*, 11(3), e0149517. doi: 10.1371/journal.pone.0149517 [PubMed: 26937971]
- Hatzold K, Mavhu W, Jasi P, Chatora K, Cowan FM, Taruberekera N, . . . Njeuhmeli E (2014). Barriers and Motivators to Voluntary Medical Male Circumcision Uptake among Different Age Groups of Men in Zimbabwe: Results from a Mixed Methods Study. *PLOS ONE*, 9(5), e85051. doi: 10.1371/journal.pone.0085051 [PubMed: 24802746]
- Ikwegbue JN, Ross A, & Ogbonnaya H (2015). Rural Zulu women's knowledge of and attitudes towards medical male circumcision. *Afr J Prim Health Care Fam Med*, 7(1). doi: 10.4102/phcfm.v7i1.775
- Joint United Nations Programme on HIV/AIDS. (2016). Prevention Gap Report. Geneva, Switzerland.
- Jones D, Cook R, Arheart K, Redding CA, Zulu R, Castro J, & Weiss SM (2014). Acceptability, Knowledge, Beliefs, and Partners as Determinants of Zambian Men's Readiness to Undergo Medical Male Circumcision. *AIDS and behavior*, 18(2), 278–284. doi: 10.1007/s10461-013-0530-0 [PubMed: 23757123]
- Kagaayi J, Kong X, Kigozi G, Ssekubugu R, Kigozi G, Nalugoda F, . . . Gray RH (2016). Self-selection of male circumcision clients and behaviors following circumcision in a service program in Uganda. *Aids*, 30(13), 2125–2129. doi: 10.1097/qad.0000000000001169 [PubMed: 27203716]
- Kim SJ (2008). Evaluation of impact of adult male circumcision programs on HIV incidence and prevalence: Current research gaps in knowledge and recommendations for additional research Report of a roundtable discussion convened by the forum for collaborative HIV research. Washington, DC <https://www.malecircumcision.org/resource/evaluation-impact-adult-male-circumcision-programs-hiv-incidence-and-prevalence-current>.
- Kong X, Kigozi G, Nalugoda F, Musoke R, Kagaayi J, Latkin C, . . . Gray R (2012). Assessment of Changes in Risk Behaviors During 3 Years of Posttrial Follow-up of Male Circumcision Trial Participants Uncircumcised at Trial Closure in Rakai, Uganda. *American Journal of Epidemiology*, 176(10), 875–885. doi: 10.1093/aje/kws179 [PubMed: 23097257]
- Lanham M, L'Engle K L, Loolpapit M, & Oguma IO (2012). Women's roles in voluntary medical male circumcision in Nyanza Province, Kenya. *PLoS One*, 7(9), e44825. doi: 10.1371/journal.pone.0044825 [PubMed: 23028634]
- Layer EH, Beckham SW, Mgeni L, Shembilu C, Momburi RB, & Kennedy CE (2013). "After my husband's circumcision, I know that I am safe from diseases": women's attitudes and risk perceptions towards male circumcision in Iringa, Tanzania. *PLoS One*, 8(8), e74391. doi: 10.1371/journal.pone.0074391 [PubMed: 24009771]
- Layer EH, Beckham SW, Momburi RB, Peter M, Laizer E, & Kennedy CE (2014a). 'He is proud of my courage to ask him to be circumcised': experiences of female partners of male circumcision clients in Iringa region, Tanzania. *Cult Health Sex*, 16(3), 258–272. doi: 10.1080/13691058.2013.873481
- Layer EH, Beckham SW, Momburi RB, Peter M, Laizer E, & Kennedy CE (2014b). 'He is proud of my courage to ask him to be circumcised': experiences of female partners of male circumcision clients in Iringa region, Tanzania. *Cult Health Sex*. doi: 10.1080/13691058.2013.873481
- Lilleston PS, Marcell AV, Nakyanjo N, Leonard L, & Wawer MJ (2017). Multilevel influences on acceptance of medical male circumcision in Rakai District, Uganda. *AIDS Care*, 1–7. doi: 10.1080/09540121.2016.1274014
- Maibvise C, & Mavundla TR (2014). Reasons for the low uptake of adult male circumcision for the prevention of HIV transmission in Swaziland. *Afr J AIDS Res*, 13(3), 281–289. doi: 10.2989/16085906.2014.952652 [PubMed: 25388982]
- Mantell JE, Smit JA, Saffitz JL, Milford C, Mosery N, Mabude Z, . . . Stein ZA (2013). Medical male circumcision and HIV risk: perceptions of women in a higher learning institution in KwaZulu-Natal, South Africa. *Sex Health*, 10(2), 112–118. doi: 10.1071/sh12067 [PubMed: 23448912]

- Maraux B, Lissouba P, Rain-Taljaard R, Taljaard D, Bouscaillou J, Lewis D, . . . Auvert B (2017). Women's knowledge and perception of male circumcision before and after its roll-out in the South African township of Orange Farm from community-based cross-sectional surveys. *PLOS ONE*, 12(3), e0173595. doi: 10.1371/journal.pone.0173595 [PubMed: 28339497]
- Martinez Perez G, Trivino Duran L, Gasch A, & Desmond N (2015). Towards a gender perspective in qualitative research on voluntary medical male circumcision in east and southern Africa. *Glob Public Health*, 10(5–6), 626–638. doi: 10.1080/17441692.2015.1014826 [PubMed: 25727455]
- Mati K, Adegoke KK, & Salihu HM (2016). Factors associated with married women's support of male circumcision for HIV prevention in Uganda: a population based cross-sectional study. *BMC Public Health*, 16, 696. doi: 10.1186/s12889-016-3385-2 [PubMed: 27484177]
- Mugwanya KK, Baeten JM, Nakku-Joloba E, Katabira E, Celum C, Tisch D, & Whalen C (2010). Knowledge and attitudes about male circumcision for HIV-1 prevention among heterosexual HIV-1 serodiscordant partnerships in Kampala, Uganda. *AIDS Behav*, 14(5), 1190–1197. doi: 10.1007/s10461-010-9696-x [PubMed: 20387112]
- Mulrenan C, Colombini M, Howard N, Kikuvu J, & Mayhew SH (2015). Exploring risk of experiencing intimate partner violence after HIV infection: a qualitative study among women with HIV attending postnatal services in Swaziland. *BMJ Open*, 5(5)
- Nabaitu J, Bachengana C, & Seeley J (1994). Marital instability in a rural population in south-west Uganda: implications for the spread of HIV-1 infection. *Africa (Lond)*, 64(2), 243–251 [PubMed: 12320088]
- Ninan A (2003). Without my consent - women and HIV-related stigma in India. New Delhi <http://www.prb.org/Publications/Articles/2003/WithoutMyConsentWomenandHIVRelatedStigmaInIndia.aspx>.
- Osaki H, Mshana G, Wambura M, Grund J, Neke N, Kuringe E, . . . Changalucha J (2015). "If You Are Not Circumcised, I Cannot Say Yes": The Role of Women in Promoting the Uptake of Voluntary Medical Male Circumcision in Tanzania. *PLoS One*, 10(9), e0139009. doi: 10.1371/journal.pone.0139009 [PubMed: 26402231]
- Plank RM, Makhema J, Kebaabetswe P, Hussein F, Lesetedi C, Halperin D, . . . Lockman S (2010). Acceptability of infant male circumcision as part of HIV prevention and male reproductive health efforts in Gaborone, Botswana, and surrounding areas. *AIDS Behav*, 14(5), 1198–1202. doi: 10.1007/s10461-009-9632-0 [PubMed: 19924526]
- Plotkin M, Castor D, Mziray H, Kuver J, Mpuya E, Luvanda PJ, . . . Mahler H (2013). "Man, what took you so long?" Social and individual factors affecting adult attendance at voluntary medical male circumcision services in Tanzania. *Glob Health Sci Pract*, 1(1), 108–116. doi: 10.9745/GHSP-D-12-00037 [PubMed: 25276521]
- Quinn C, Nakyanjo N, Ddaaki W, Burke VM, Hutchinson N, Kagaayi J, . . . Kennedy CE (2018). HIV Partner Notification Values and Preferences Among Sex Workers, Fishermen, and Mainland Community Members in Rakai, Uganda: A Qualitative Study. *AIDS Behav*. doi: 10.1007/s10461-018-2035-3
- Riess TH, Achieng MM, & Bailey RC (2014). Women's Beliefs about Male Circumcision, HIV Prevention, and Sexual Behaviors in Kisumu, Kenya. *PLOS ONE*, 9(5), e97748. doi: 10.1371/journal.pone.0097748 [PubMed: 24844845]
- Ritchie J, & Spencer L (2003). Qualitative data analysis for applied policy research In Bryman A & Burgess RG (Eds.), *Analyzing qualitative data* (pp. 173–194). London, New York: Routledge.
- Semeere AS, Castelnovo B, Bbaale DS, Kiragga AN, Kigozi J, Muganzi AM, . . . Kambugu A (2016). Innovative Demand Creation for Voluntary Medical Male Circumcision Targeting a High Impact Male Population: A Pilot Study Engaging Pregnant Women at Antenatal Clinics in Kampala, Uganda. *J Acquir Immune Defic Syndr*, 72 Suppl 4, S273–279. doi: 10.1097/qai.0000000000001041 [PubMed: 27404008]
- Sgaier SK, Reed JB, Sundaram M, Brown A, Djimeu E, & Ridzon R (2016). Interventions to Drive Uptake of Voluntary Medical Male Circumcision—A Collection of Impact Evaluation Evidence. *Journal of Acquired Immune Deficiency Syndromes* (1999), 72(Suppl 4), S257–S261. doi: 10.1097/QAI.0000000000001155

- Ssekubugu R, Leontsini E, Wawer MJ, Serwadda D, Kigozi G, Kennedy CE, . . . Gray RH (2013). Contextual barriers and motivators to adult male medical circumcision in Rakai, Uganda. *Qual Health Res*, 23(6), 795–804. doi: 10.1177/1049732313482189 [PubMed: 23515302]
- Uganda AIDS Commission. (2015). The Uganda HIV and AIDS country progress report 2014. Kampala, Uganda <http://www.aidsuganda.org/images/documents/GARPR.pdf>.
- UNAIDS/CAPRISA. (2007). Consultation on social science perspectives on male circumcision for HIV prevention: 18–19 January, 2007; summary report. Durban, South Africa http://data.unaids.org/pub/agenda/2007/20070303_male_circumcision_report_en.pdf.
- Wawer MJ, Makumbi F, Kigozi G, Serwadda D, Watya S, Nalugoda F, . . . Gray RH (2009). Circumcision in HIV-infected men and its effect on HIV transmission to female partners in Rakai, Uganda: a randomised controlled trial. *Lancet*, 374(9685), 229–237. doi: 10.1016/S0140-6736(09)60998-3 [PubMed: 19616720]
- Westercamp N, Agot K, Jaoko W, & Bailey RC (2014). Risk Compensation Following Male Circumcision: Results from a Two-Year Prospective Cohort Study of Recently Circumcised and Uncircumcised Men in Nyanza Province, Kenya. *AIDS and Behavior*, 18(9), 1764–1775. doi: 10.1007/s10461-014-0846-4 [PubMed: 25047688]
- Wilcken A, Miiro-Nakayima F, Hizaamu RN, Keil T, & Balaba-Byansi D (2010). Male circumcision for HIV prevention--a cross-sectional study on awareness among young people and adults in rural Uganda. *BMC Public Health*, 10, 209. doi: 10.1186/1471-2458-10-209 [PubMed: 20420701]
- Wilson N, Frade S, Rech D, & Friedman W (2016). Advertising for Demand Creation for Voluntary Medical Male Circumcision. *J Acquir Immune Defic Syndr*, 72 Suppl 4, S288–291. doi: 10.1097/qai.0000000000001039 [PubMed: 27404010]

Table 1.

Participant characteristics

	Fishing communities	Trading communities	Total
Women with non-Muslim partners circumcised	02	03	05
Women with non-Muslim partners uncircumcised	03	03	06
Single women	02	02	04
Bar girls/sex workers	05	07	12
Total across communities	12	15	27