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Enhancers and barriers to uptake of male circumcision services in Northern Uganda: a qualitative study

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ABSTRACT

Uganda adopted voluntary medical male circumcision (VMMC) in 2010, but uptake remains disproportionately low in the Northern region despite implementing several demand creation strategies. This study explored the socio-cultural and structural enhancers and barriers to uptake of VMMC services in Gulu, a district in Northern Uganda where uptake is lowest. In September 2016, we conducted 19 focus group discussions, 9 in-depth interviews, and 11 key informant interviews with 149 total participants. Data were collected and analyzed thematically using both inductive and deductive approaches, then framed in four levels of the social ecological model. Enhancers included adequate knowledge about VMMC services, being young and single, partner involvement, peer influence, perceived increased libido after circumcision, and availability of free and high-quality VMMC services. Barriers included sexual abstinence during wound healing, penile appearance after circumcision, religion, culture, and misconceptions. Optimizing enhancers and addressing barriers could increase VMMC service uptake in northern Uganda.

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Male circumcision; uptake; facilitators; challenges

Introduction

Voluntary medical male circumcision (VMMC) reduces female-to-male transmission of HIV by approximately 60% (Auvert et al., 2005; Bailey et al., 2007; Gray et al., 2007). Since 2010, 14 priority countries in Eastern and Southern Africa have scaled up VMMC as part of combination HIV prevention following recommendations by the World Health Organization (WHO) and the United Nations Joint Programme on HIV/AIDS (UNAIDS) (WHO and UNAIDS, 2007; WHO and UNAIDS, 2011). A modeling study in Uganda suggested that 6.9 million 10–49 year old males had to be circumcised by 2020 to achieve 80% coverage needed for public health benefit (Kripke et al., 2016).

The Uganda Ministry of Health (MoH), with support from the U.S. President's Emergency Fund for AIDS Relief (PEPFAR), increased availability of VMMC services and intensified mobilization in communities. VMMC prevalence among Ugandan men aged 15–49 years increased from 26% in 2011 to 43% in 2016, but wide regional variations persist, ranging from 69% in the Mid-Eastern region to 14% in the Mid-Northern Region (MoH, 2019). Several strategies have been suggested to increase uptake including mobile outreaches, dedicated teams, dedicated VMMC days, devices, education entertainment, and implementing VMMC as a vertical program (Gourlay, Birdthistle, Mburu, Iorpenda, & Wringe, 2013; Kitara, Lagoro, Ocero, Lanyero, & Ocom, 2013; Mati, Adegoke, & Salihu, 2016; Menon et al., 2014; WHO Regional Office for Africa, 2013). Anecdotal reports suggest specific socio-cultural reasons and inadequate knowledge of key VMMC messages may explain the disproportionately low uptake in this region. In a complementary quantitative study, we found that over a quarter (27.5%) of male participants in northern Uganda had inadequate knowledge of key VMMC messages (Nanteza et al., 2018). More in-depth understanding of enhancers and barriers is needed in such a region with very low uptake of VMMC. However similar studies that have been done in the other 14 East and Southern priority countries (Abunah et al., 2016; Carrasco, Wilkinson, Kasdan, & Flemming, 2019; George, Govender, Beckett, Montague, & Frohlich, 2017; Hatzold et al., 2014).

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Methods

Study design and setting

The study was conducted in Gulu district, northern Uganda, a region scarred from a recent twenty-year civil war that fueled the HIV epidemic and internally displaced many people. The study was conducted in September 2016 in the catchment areas of the four public health facilities providing VMMC: Lacor Hospital, Gulu Regional Referral Hospital, Awach Health Center IV, and Lalogi Health Center IV.

Data were collected from 149 individuals aged 10 to 69 years who participated in 19 focus group discussions (FGDs), 11 key informant interviews (KIIs), 9 in-depth interviews (IDIs), and a one-day workshop with all district health team (DHT) members where we discussed the barriers and enhancers at district level. Each FGD consisted of 6–8 individuals of similar age, gender, and marital status (Table 1). After the 19 FGDs, IDIs and KIIs were conducted until saturation was attained. IDIs were conducted with men and women who held strong opinions for and against circumcision, as identified by village health teams. Cultural leaders from the Acholi cultural institution and religious leaders from the main religions (Catholic, Anglican, Pentecostal, Muslim, Seventh Day Adventist, and traditional) were selected for KIIs. Circumcision status was not considered in study recruitment because it was very low in this region. Study team members were trained persons recruited from northern Uganda who were fluent in both Acholi and English. The lead investigator was the national VMMC coordinator.

FGD, KII, and IDI guides covered factors that enhance or hinder uptake of VMMC services, including culture, religion, tribe, socioeconomic status, education, and occupation. Participants were informed of the purpose of the study, the extent of their involvement, and their rights before obtaining written consent and assent. Interviews were conducted in the participant's preferred language and digitally recorded. They lasted 60–90 min for FGDs and 45 min for IDIs and KIIs. Participants received refreshments and 7,000 Ugandan shillings (~US$2) for their time.

Following a preliminary analysis of qualitative results, a dissemination workshop with VMMC major stakeholders in Gulu district was held in July 2017. The workshop generated additional information and discussion about the factors that may enhance or hinder uptake of VMMC services mainly at their district.

Table 1. Summary of the IDIs, KIIs and FGDs conducted.

	Number (No.) conducted	
Focus Group Discussions (FGDs)	No. FDGs (19)	No. Participants (129)
Children boys (10–12 years)	1	8
Adolescent boys (13–19 years)	3	19
Unmarried men (20–25, 26–34, 35+ years)	3 (one per subgroup)	21
Married men (20–25, 26–34 years)	2 (one per subgroup)	15
Married men (35+ years)	4	27
Unmarried women (18–24, 25–34, 35+ years)	3 (one per subgroup)	20
Unmarried women (18–24, 25–34, 35+ years)	3 (one per subgroup)	19
Key Informant Interviews (KIIs)	11 Participants total	
Cultural leaders	5	
Religious leaders	6	
In-Depth Interviews (IDIs)	9 Participants total	
Pro-circumcision	3	
Anti-circumcision	6	

Data analysis

All data from FGDs, IDIs, and KIIs were first transcribed in Acholi, then translated into English. MAXDQA software was used for data management and analysis. We used a socio-ecological model (SEM) comprising four levels (individual, household, community, and district) to conduct deductive analysis (Sweat & Denison, 1995). A codebook was developed based on initial discussions using the SEM. The resulting codes were discussed, narratively summarized, and presented.

Ethical considerations

The Makerere University School of Public Health Higher Degrees Research and Ethics Committee (HDREC) and the Uganda National Council for Science and Technology (UNCST) approved the protocol (# TR2015002451). Permission for data collection was obtained from the district health office, the residential district commissioner, and local community leaders.

Results

FGD participants included a wide range of community members, including married and unmarried men and women of various ages and some boys; KIIs included both cultural and religious leaders, and IDIs explored pro- and anti-circumcision viewpoints (Table 1). Findings are presented below across the four levels of the SEM; themes are summarized with supportive quotes in Table 2.

Individual level

Enhancers

Knowledge of VMMC benefits among highly educated participants. Participants (both male and female) with

Table 2. Themes and supportive quotes.

Category	Factors/ Theme	Quote
Individual level		
Enhancers	Knowledge about benefits of VMMC among high education levels	"Ever since I learned about the benefits of circumcision, I cannot date a man who is not circumcised. On every first date, that is the first question I ask." [Female, 26 years, tertiary education, IDI]
	Peer influence among youth	"I think being circumcised is cool. Some of my friends at school are circumcised and they are happy. So that is why I also decided to get circumcised." [Male, 21 years, secondary education, FGD]
	Perceived improved sexual performance	"Before circumcision I never used to satisfy my wife, but now she says I am the best. I would only take a few minutes then I ejaculate, but now I take close to an hour." [Male, 35 years, primary education, IDI]
Barriers	VMMC is not a priority health issue	"We have health priorities of which circumcision is not among. Instead of wasting our taxes on programs that don't work, why don't you instead supply medicines in all government hospitals?" [Male, 36 years, primary education, IDI]
	Duration of sexual abstinence during wound healing	"I tried to abstain from sex for 4 weeks but I could not resist the temptation. I love my wife very much and we continued sharing the same bed." [Newly circumcised male, 27 years, tertiary education, IDI]
	Penile appearance	"My friend was rejected by his girlfriend after he was circumcised on grounds that his penis looked like that of a baboon and behaved like he was taking drugs making love for a much longer than before. If he hadn't been circumcised, he would still have his girlfriend!" [Male, 18 years, secondary education, FGD]
	Adverse events after being circumcised	"It's very sad that even health care workers have started operating like taxi drivers. Before you are circumcised they promise you heaven on earth, but the moment you get circumcised they do not pick your calls." [Male, 34, primary education, FGD]
	Non-involvement of women	"It's me who knows what's good or bad for my children, thus my opinion on SMC [safe male circumcision] really matters a lot if you are to circumcise them." [Female, 27 years, primary education, FGD]
	Disinhibition	"Most of my friends after getting circumcised they say that they were told that they are immune to HIV." [Uncircumcised male, 21 years, secondary education, FGD]
Household level		
Enhancers	Monogamous families with greater gender equality	"After learning about the benefits of circumcision from my brother, I begged my husband to get circumcised. He requested for my support during wound healing and he got circumcised the following day. Since then we are very happy and all our sons are circumcised." [Female, 42 years, secondary education, KII]
Barriers	Low income families	"My neighbors suffered with their son after he got an infection after being circumcised. They spent all the little money they had." [Female, 32 years, primary education, FGD]
	Low literacy levels	"I have seen Muslims die. I think government wants to kill us and take our land. We survived the war but now they are trying to use VMMC." [Male, 57 years, no education, KII]
	Both partners from northern Uganda	"In our culture it's not good for a man to be circumcised. That's for men from other tribes who want to entice women. We are very happy as God created us." [Male, 46 years, primary education, FGD]
Community level		
Enhancers	Adequate comprehensive knowledge about VMMC	"Our youth are dying from HIV, so if circumcision is promoted by the government to reduce HIV among our youth, we should be involved by the service providers to promote it." [Male, 67 years, primary education, KII]
	Availability and easy access to free, safe, and high quality VMMC services	"We are very grateful that we can access these services free of charge and they are usually brought in our communities through outreaches." [Male, 52 years, primary education, KII]
Barriers	Religion	"Circumcision is a ritual for Muslims. This was for those greedy people who sold our people to whites. As long as I live I will never embrace anything that they stood for" [Male, 62 years, primary education, KII] "After all, the Bible recommends circumcision of the heart, not the body. There are many other ways you can reduce your chances of acquiring HIV other than circumcision." [Male, 43 years, secondary education, KII]
	Culture	"I respect my king so I only promote what my chief tells me to tell his people. No one has ever told us about circumcision so we cannot promote it" [Male, 54 years, primary education, KII]
	Misconceptions about circumcision	"When you allow to bury any part of your body while still alive, not only you get bad luck but even all your family members." [Male, 59 years, primary education, IDI] "Any man that spills blood intentionally is ungodly. Even he is rejected by traditional herbalists." [Male, 49 years, no education, FGD]
District level		
Enhancers	Trained and certified service providers	"We are very grateful that almost all the service providers are trained" [District Health Officer]
	Availability of supplies and equipment	"We wish PEPFAR could also fund other health services, VMMC programme has supplies that theatres and maternity centres that do not have." [Chief Administrative Officer]
	Regularly updated data collection and reporting tools	"Unlike other programmes, VMMC is a very special programme with all tools reviewed more regularly than other programmes." [District Biostatistician]
Barriers	Lack of district ownership of the SMC programe	"As district leaders, we do not have a say in the VMMC programme; we do not set or allocate targets, which makes supervision very difficult." [District Health Officer]
	Coordination and implementation of VMMC activities by IPs	"All we do is to coordinate implementing partners; usually they are more than one, and all are doing VMMC in the same location. This makes coordination a nightmare." [District Education Officer]
	Non-involvement of districts in developing VMMC mobilization messages	"The VMMC programme has a lot of resources, that you just wake up one morning and see a very big billboard which at times is not even the local language." [District Mobilizer]

secondary or higher education levels demonstrated high knowledge about VMMC and its benefits.

Peer influence among youth. Young people (aged 10–29 years) considered circumcision fashionable; uptake in this age group was driven by peer influence. Older (aged 30 years and above) participants considered circumcision to be for young men who were still experimenting and making discoveries about their bodies.

Perceived improved sexual performance. Almost all circumcised participants reported improved sexual performance following circumcision with some spouses of circumcised men reporting "better quality" sexual performance after circumcision.

Barriers

Other health issues prioritized. Due to the civil war, there were many internally displaced persons. They felt they had other health issues that were more important than circumcision since they saw Muslims and other persons from traditionally circumcising communities die from HIV.

Duration of sexual abstinence during wound healing. Sexually active men said that the required six weeks of sexual abstinence after circumcision were too long. They preferred to get circumcised during the absence of their sexual partners to avoid arousal that might lead to prolonged healing.

Penile appearance. Participants expressed concern about the appearance of a circumcised penis, using the word "layom" (referring to having a penis with an exposed glans like a baboon's).

Adverse events after circumcision. Some participants reported that friends' experiences of adverse events following circumcision made them shy away from circumcision.

Non-involvement of women. In the current communication strategy, women are considered a secondary audience; yet they are mothers and spouses to VMMC clients.

Disinhibition. Before getting circumcised, all clients are counseled about the benefits of VMMC. Some participants said individuals mistake approximately 60% reduction of HIV infection after VMMC for immunity, resulting in promiscuity.

Household level

Enhancers

Monogamous families with greater gender equality. Although men make most family decisions, male participants seemed more likely to seek VMMC if they were in a monogamous relationship or had greater gender equality within the family.

Barriers

Low-income families. Wound care is an important aspect of successful circumcision. Low-income families felt they already had enough health problems and were not willing to undertake the additional burden of wound care and the risk of potential infection.

Low literacy levels. Implementing partners (IPs) frequently mobilized men to seek VMMC services through written materials like billboards and brochures. These messages were often poorly understood by community members with low literacy levels.

Both partners from Northern Uganda. In families where both spouses were from the same tribe or from Northern Uganda, men seemed very reluctant to get circumcised.

Community level

Enhancers

Adequate comprehensive knowledge about VMMC. Communities believed that adequate comprehensive knowledge about VMMC services would enhance uptake and combat HIV. Most community leaders were ready to promote VMMC only if IPs involved them.

Availability and access to free VMMC services. The communities were grateful that VMMC services were free of charge, readily available, and easily accessible at many health facilities.

Safe and high quality VMMC services. All IPs are required to provide quality VMMC services through trained and certified service providers.

Barriers

Religion. The people in Acholi region held negative feelings towards Islam because of past experiences. Some associated circumcision with Islam, leading to negative feelings and perceptions about circumcision.

Culture. Cultural leaders informed the study team that their kingdom was a member of the district health committee and often attended district health meetings.

However, they had not promoted VMMC because no one had ever approached their institution to promote circumcision.

Misconceptions about circumcision. Some of the misconceptions expressed by participants included: 1) if you got circumcised part of you (the prepuce) dies and is buried, which would bring bad luck to you and your family; 2) any man who "spilled" blood was considered ungodly; 3) when you get circumcised, you lose your libido; and 4) anesthesia makes a man sterile. These views were also expressed by women.

District level

Enhancers

Trained and certified service providers. It was revealed that MoH and previous IPs had trained many service providers. However, they informed the team that all previous IPs did not allow these health care workers to offer VMMC services but would instead bring service providers from other regions whom they referred to as "Karuma crossers" (a derogatory term for outsiders).

Availability of supplies and equipment. All district health officers appreciated the availability of VMMC supplies, yet wondered how VMMC services could have emergency resuscitation kits while most of their maternity wards or surgical theaters did not have these supplies.

Barriers

Lack of district ownership of the SMC program. Almost all district health team (DHT) members agreed that they did not know how IPs were chosen to implement VMMC services. They also said they did not know how targets were set and allocated. This made them feel that they were not in control or did not own the VMMC program.

Coordination and implementation of VMMC activities by IPs. Many DHT members were not fully aware of VMMC activities conducted in their districts and attempts to get information about implementation plans were futile. This made government health care workers not want to encourage or support VMMC services.

Non-involvement of districts in developing VMMC mobilization messages. The DHT members complained that they were never involved in the development of VMMC mobilization messages. They said that some billboards in their districts had VMMC messages written in other local languages which made them believe that these messages were not meant for their people.

Discussion

Although VMMC coverage has improved from 4% in 2011, currently it is just 13% in Mid-North region (MoH, 2019). Uganda has not yet attained the recommended 80% coverage especially in northern Uganda (Carrasco, Nguyen, & Kaufman, 2018). This study explored the factors that facilitate or hinder uptake of VMMC services in Gulu district. Some of the key enhancers were availability of safe VMMC services, adequate knowledge of benefits of VMMC, being young and single, perceived sexual improvement after VMMC, and partner's involvement or interest in male circumcision. On the other hand, barriers were mainly social-cultural, especially peer influence, adverse events, appearance of a circumcised penis, duration of abstinence during wound healing, misconceptions, culture, and religion. Lack of district ownership or involvement during planning and implementation of the VMMC program was a major barrier at the district level.

Apart from a recent study that provided evidence about inadequate knowledge about VMMC messages, no studies have been conducted to understand socio-cultural factors that enhance or hinder uptake of VMMC in northern Uganda (Nanteza et al., 2018). Almost all interviewed cultural and religious leaders wanted to be involved in sensitizing the communities about VMMC. Similar studies elsewhere have shown that when local leaders were involved in VMMC programs, uptake increased (Ahmad, Jandu, Albagli, Angus, & Ginsburg, 2013; Aizire, Fowler, & Coovadia, 2013; Friedrich, 2017; WHO, UNAIDS and London School of Hygiene and Tropical Medicine 2007).

Sexual behaviors after circumcision seemed to influence uptake of VMMC, especially among those who were sexually active and not in stable relationships (Abbott, Haberland, Mulenga, Hewett, & Niccolai, 2013; Andersson et al., 2012; Wambura et al., 2017). Another study showed that if peers were satisfied with VMMC services offered, they were more likely to encourage their friends to seek VMMC services (Kibira et al., 2017; Kigozi et al., 2014; Spense et al., 2017).

Our findings reinforce the important role that women play in VMMC uptake, as demonstrated in other studies (Lanham, L'Engle, Loolpapit, & Oguma, 2012; Maraux et al., 2017; Shacham, Godlonton, & Thornton, 2014; Westercamp, Agot, Ndinya-Achola, & Bailey, 2012). In Uganda, regions where women are recruited as VHTs have slightly higher VMMC coverage as compared to regions that predominantly use male VHTs. Rate of

adverse events seems to be lower because women usually provide post-surgical support and wound care to their family members (Friedland, Apicella, Schenk, Sheehy, & Hewett, 2013; Gray et al., 2009). In many communities, women's perception about circumcision really mattered to unmarried men, so involving women should increase VMMC uptake (Johnson et al., 2016; Lilleston, Marcell, Nakyanjo, Leonard, & Wawer, 2017; Sabapathy et al., 2012).

We found that religion was considered a barrier to uptake of VMMC services. The majority of the population in this setting are Catholics. A recent study in Rakai district highlighted religion as a key barrier (Lilleston et al., 2017; Ssekubugu et al., 2013). VMMC messaging should continue to emphasize that VMMC is not associated with a specific religious tradition.

Adverse events after circumcision were mentioned as potential barrier to VMMC uptake. However, the Safety Monitoring team at MoH has received reports of adverse events including at least sixteen deaths as of October 2019. Such occurrences of serious adverse and fatal events are significant barriers to VMMC uptake. VMMC IPs will need to ensure that their teams are well trained and certified, so as to prevent adverse events and build confidence within the population.

For VMMC uptake to increase in Gulu district, all the barriers must be addressed and the enhancers encouraged. VMMC IPs in the region should work with MoH, districts, and local leaders to address these issues at all levels. Since VMMC is for HIV prevention, future studies should focus on factors influencing men who are at higher risk of HIV infection. For policy makers, these findings can improve uptake of VMMC services if the IP in northern Uganda can address barriers while working with the district and regional stakeholders. Cultural and religious leaders should be involved in the implementation of VMMC programe.

Strengths and limitations

One strength of this study was its qualitative approach. Instead of counting, we tried to understand in detail the barriers and enhancers of VMMC uptake at four different SEM levels. This was the first study in this region to include women with important perspectives on VMMC uptake.

The study was conducted in Gulu, a central district with urban, peri-urban, and rural communities. The study team majorly comprised of young men and women from the region so they freely dialogued with participants using both English and Acholi. VHTs who mobilize men for VMMC services were used to select participants since they were very conversant with the communities. The VHTs and the lead author were never part of the interviews or discussions, which limited bias and allowed the participants to discuss the real issues that affected uptake of VMMC services in Gulu.

Limitations of the study included the fact that it was conducted in a district that had the highest coverage of VMMC in the region, which may limit the transferability of our findings. Participant responses may have been influenced by social desirability, particularly as the study team may have been seen as being related to health care service provision in the setting. However, we tried to combat this by specifically including interviews with people who were both supportive and unsupportive of circumcision.

Conclusion

The study revealed that more needs to be done in Gulu district if potential SMC clients are to benefit from VMMC. Although culture and religion were barriers, they were not the major concerns. Adequate knowledge and women's involvement were the main enhancers.

Since VMMC is an HIV prevention intervention, barriers should be addressed and enhancers encouraged. Specifically, we suggest that women's involvement should be encouraged, since women act as both spouses and mothers to potential clients. Second, we suggest addressing misconceptions through improved community mobilization, sensitization, and health education. Finally, a wider range of stakeholders should be engaged for program ownership.

Geographical information

This work took place in Gulu District, Northern Uganda.

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