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Factors influencing uptake of voluntary medical male circumcision among men in Rorya district, Tanzania

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Abstract

Introduction: Almost two decades ago, the WHO and UNAIDS declared male circumcision as one of the methods for the prevention of new HIV infections in high-burden countries. Despite efforts by government and non-governmental organizations (NGOs), uptake of voluntary medical male circumcision (VMMC) among traditionally non-circumcising communities in Northern Tanzania is below 60%. Hence, there is a need to investigate factors influencing the uptake of VMMC in these communities for the integration of VMMC programs in HIV prevention.

Objective: To explore factors influencing the uptake of VMMC services among men in traditionally non-circumcising communities in Rorya district, Mara region.

Materials and methods: This case study used a qualitative approach to explore factors influencing the uptake of VMMC in the Rorya district. In-depth interviews (IDIs) and focus group discussions (FGDs) were used to collect information from purposively selected participants. Four FGDs involving eight members each and 20 IDIs were conducted during the study. Data was recorded using audio recorders. Data was transcribed verbatim, and thematic analysis was done with the help of NVivo version 12.

Results: This study's findings can be grouped into three main themes: community awareness, cultural factors, and socioeconomic factors influencing VMMC. Generally, participants mentioned stigma and discrimination, community awareness, parental decision-making, belief in traditional circumcision methods, fear of side effects, misconceptions, access to health facilities, and family income as factors influencing VMMC.

Conclusion: VMMC interventions tailored to influence community awareness and cultural and socioeconomic factors may pave the way for successful provision of VMMC for HIV prevention in northern Tanzania.

Keywords: Voluntary medical male circumcision, utilization, HIV, prevention, Tanzania

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Introduction

Randomized controlled trials conducted in Kisumu Kenya, Rakai district in Uganda, and Orange state in South Africa demonstrated that male circumcision can reduce the chances of new HIV acquisition by up to 60% among heterosexual men (WHO/UNAIDS, 2007). According to reports, about 3.4 million new HIV infections and 386,000 deaths due to AIDS could be prevented in East and Southern Africa by 2025 by scaling up voluntary medical male circumcision (VMMC) to 80% of uncircumcised men in high HIV prevalence areas (Auvert et al., 2005; Menon et al., 2014). VMMC is also a highly cost-effective HIV prevention intervention (Bansi-Matharu et al., 2023). For these reasons, the WHO and UNAIDS declared and included male circumcision among strategies for prevention of new HIV infections (WHO & UNAIDS, 2007). Apart from HIV infections, male circumcision has been reported to be effective in the prevention of other sexually transmitted diseases (STDs) such as gonorrhea, syphilis, human papillomavirus (HPV) among men, and cervical cancer among women (Scott et al., 2005).

According to WHO and UNAIDS, the global goal of 80% circumcised males aged 15-49 in sub-Saharan Africa can be reached when 20.3 million circumcisions have been performed by 2025 (Mshana et al., 2011). Because of this, in 2009 the Tanzanian government through the Ministry of Health in partnership with other health agencies started scaling up of VMMC intending to increase uptake of circumcision among males in high HIV prevalence regions (Tchuenche et al., 2016). The program started with an emphasis on 8 priority regions with high HIV incidence including Njombe, Iringa, Mbeya, Mwanza, Shinyanga, Ruvuma, and Kagera.

Due to different social, cultural, and economic reasons, most VMMC programs have reported less than 50% uptake achievements (Chinkhumba et al., 2014). Even though religion, and changes in social and economic aspects have introduced a positive attitude towards VMMC, acceptance and uptake rates of VMMC have remained below expectations. The lower uptake for VMMC is more evident in non-circumcising communities in Iringa, Tabora, and among the Sukuma in the Mwanza region compared to traditionally circumcising communities. In traditionally non-circumcising communities such as the Luo and Suba in northern Tanzania, where male circumcision is not practiced as part of tradition, the acceptance and uptake of VMMC is reported to be below expectations. In these communities, men who are circumcised are perceived as weak, mocked, and labeled as disabled.

Religion and traditional values have been key determinants for preference, acceptance, and uptake of VMMC. In northern Tanzania, among the Kurya, the practice is highly regarded and perceived as an act of bravery and a symbol of passage to manhood (Leibowitz et al., 2009). In these communities, traditional male circumcision is performed in tribal ceremonies without anaesthetics or hygienic considerations. Men who have been circumcised in medical settings are being mocked and stigmatized as being weak (Phega Mangena et al., 2011). In traditionally non-circumcising communities, the practice is new and recently introduced through the expansion of Muslim and Christian religions (Prusente et

al., 2019). In these communities, the practice is culturally discouraged, and circumcised men are viewed as strangers and referred to as disabled men due to their circumcision scars (Amuri et al., 2016).

A recent study conducted in Hoima, Uganda in 2022 on factors for the uptake of VMMC among motorcycle drivers (Bodaboda riders), indicates fear of pain, compulsory HIV testing, interception of God's creation, fear of male infertility, and healing duration as hindering factors (Tusabe et al., 2022). In addition, perceived hygiene, peer pressure, and health education and awareness influenced uptake of VMMC (Plotkin et al., 2013). Other factors pointed out by Prusent et al. (2022) on the uptake of VMMC in Eastern Cape South Africa, include age eligibility, family influence, peer pressure, stigma and discrimination (Gikunju et al., 2014). For traditionally non-circumcising communities, circumcision is not an acceptable tradition and is associated with neglected cultural values, customs, traditions, beliefs and tribal laws (Rupfutse et al., 2014). There is insufficient literature on the factors influencing uptake of VMMC among non-circumcising communities such as the Waluo tribe from Rorya district in northern Tanzania. Therefore, this study determined factors influencing uptake of VMMC in traditionally non-circumcising communities.

MATERIALS AND METHODS

Study Design

This was an exploratory case study where qualitative approach was used to explore factors influencing uptake of VMMC among traditionally non-circumcising communities in Rorya district, Mara region. Qualitative approach is useful for capturing information from a small number of respondents through exploring their experiences, perceptions, and attitudes towards a particular idea, program, or situation (Haddrill et al., 2014).

Study area

The study was conducted in Rorya district, one of nine districts in Mara region in north Tanzania. The district is made of four divisions with 26 wards. According to 2022 national census, Rorya has a population of 354,490, majority belonging to the non-circumcising communities of Luo tribe. This community is characterized by lower uptake of VMMC programs due to existence of cultural norms which discourage uptake of VMMC among men (Wambura et al., 2011)). According to DHIS2 (2013-2023), Rorya district VMMC coverage is only 37%.

Study population and sampling procedure

Population for the study was divided into four strata in order to ensure inclusion of the key informants. Study population included young adult males (18-30 years), adults (31-50), older males (51-70 years), and women aged (18-70 years). We also involved key informants that included tribal leaders, community health workers, health care providers, pastors, and male circumcision practitioners. Participants from each age group was purposely selected from various wards including Koryo, Mirare, Nyamagaro, Nyathorogo, Nyamikoma, and Nyumunga. Recruitment of some participants was done at health facilities soon after being attended by health

care provider. Participants were intercepted by a researcher to request their willingness to participate in the study, majority of those who were intercepted accepted to participate in this study after a deep clarification of study aim and informed consent. Other participants were approached in the community.

Data collection methods

Data collection was conducted face-to-face using IDIs and FGDs. Interview and FGD guides were used to guide data collection, these were pretested on non-participants before commencement of the study. IDIs and FGDs were conducted in a private room at health facilities, village and ward offices, and church offices. Only researchers were present during data collection. Data was collected by 4 research assistants (1 had diploma in clinical medicine, 2 in nursing, and 1 in records management) with experience in conducting qualitative research. 4 FGDs were conducted involving 8 members each and IDIs included 20 participants. Final number of participants was determined by data saturation criteria. IDIs took an average of 20 minutes (range15-25 minutes) and FGDs 41 minutes (range 35-46 minutes). Audio-recorders were used with participants permission, and field notes were taken during data collection. There was no prior relationship between participants and researchers.

Data management and analysis

Audio data was transcribed varbatim into written transcripts without including personal identities of study participants. Data coding was carried out by two researchers using five stages of the framework analysis approach. The emerging issues from collected data were deliberated between the two researchers. Data was analyzed thematically with help of NVivo version 12 pro where data coding and categorization of similar codes (indexing) was done. Indexed data was summarized into a chart form followed by finding patterns, interpretation, and clarification of key findings. Analysis of data also involved merging of meaning units to codes, codes to subthemes which were later merged to themes labeled as key findings.

Ethical issues

Ethical clearance was obtained from MUHAS Institutional Review Board. A research permit was obtained from Rorya district council. Study participants were informed about purpose of the study, their rights to voluntary participation and withdrawal, as well as privacy and confidentiality of data. Written informed consent was obtained from all participants prior to commencement of the study.

RESULTS

Socio-demographic characteristics of study participants

A total of 44 participants (aged between 18 and 70 years) were included in this study. 35 participants were male, majority had primary education and above, and 30 participants were married (table 1).

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Table 1: Characteristics of participants

Participants background characteristics		N
Gender	Male	35
	Female	9
Age	18-22	2
	23-27	5
	28-32	11
	33-37	6
	38-42	10
	>42	10
Education	Never gone to school	5
	Primary school level	23
	Secondary school level	10
	College level	6
Marital status	Married	30
	Not married	14

Factors influencing uptake of VMMC in Rorya district

A number of factors were reported to influence the uptake of VMMC among men in Rorya; these factors fall into three main themes: community awareness, cultural factors, and socio-economic factors influencing the uptake of VMMC.

Community awareness of VMMC and its benefits

The majority of people in the community were aware of VMMC and its benefits. Participants shared their experiences on how a project used interesting information, education, and communication mechanisms to reach many people in a short time. The strategies used were the distribution of brochures, flyers, and music as entertainment to attract people to VMMC. Explaining how they got information about VMMC, older men who got circumcision services said that;

"Community awareness about voluntary male circumcision is very high because a few months ago there were buses coming from Kenya just to offer men transport to be circumcised." **(IDI No.1-Male, 75 years)**

"We were getting information like other people living in urban centres because they used a car with music, and they were passing to each village to motivate people with education on benefits related to male circumcision." **(IDI No. 11-Tribal leader)**

Adding to this view another participant said that;

"They had some brochures with a message encouraging men to get circumcised, people were very curious to know what message was in brochures, so they received the brochures which altered their attitude towards male circumcision."

(IDI No.20- Pastor)

The majority of people in the community were aware of the benefits associated with male circumcision. Referring to different interventions done within the community on health matters, participants reported that male circumcision protects men from acquiring sexually transmitted diseases such as HIV.

"Male circumcision is a service given to clients which makes penis skin hard to the extent that it cannot get any bruises easily during sexual intercourse compared to one who is not circumcised." (**IDI NO.3- Female, 67 years**)

Cultural factors influencing uptake of VMMC

Misconceptions

Participants described some misconceptions associated with circumcision; for example, they described fear of witchcraft among men, where some men, especially the Luo whose culture is against circumcision, had doubts about the disposal of foreskin after circumcision, while others feared that their foreskin is used as an ingredient in some local herbs/witchcraft. A man who had heard about concerns of bewitchment talked about this misconception.

"Majority are doubting about the place where foreskins are disposed after circumcision, people think that there must be some witchcraft where their foreskins are used." (**FGD No.1-Adolescent boy, 18 years**)

It was also reported by another man on the same issue that.
".....there is issue of witchcraft; you may find that traditional healers use these foreskins because I have seen them using some of human being organs mixing with other herbal medicine...." (**IDI No.20-Pastor, 39 years**)

Stigma

Stigma against younger men who were not circumcised led to willingness to accept male circumcision, but stigma against older men who got circumcised at adult age caused refusals to get circumcised. Uncircumcised students from Rorya who were selected to join schools in other regions were stigmatized by their fellow students if they were not circumcised as a result they sought circumcision, but majority of adults who were circumcised at old age were stigmatized as a result they feared to get circumcised.
Adult man who experienced stigma shared his experience that:
"It is very shameful for an adult like me to wear khanga after being circumcised, people within our community may laugh at you and stigmatize you once they know that you were not circumcised." (**FGD No.1- Adult male, 49 years**)

An adolescent boy also commented that;
"It is very difficult to survive in boarding school if you're not circumcised because we bath together so once your peers recognize that you're not circumcised you will be stigmatized." (**IDI No.18-Young adult**)

A CHW had the following information to share;
"In this community there is stigma against those men who are not circumcised, but previously it was vice versa that men who were circumcised were stigmatized because it was not their culture." (**IDI No1.9-CHW, 45years**)

Parental decision making
It was further reported that parent's decision has a greater role for youths' decision on circumcision. Youths living with parents or guardians who are against circumcision seemed to be reluctant to get circumcised, but for those who get support from their parents were willing to get circumcised earlier before puberty stage. Youths who participated in this study shared the following information;

"Sometimes you may wish to be circumcised but once you consult your father the response you get is negative, as he believes that you don't need to be circumcised to be a gentleman, but you may remove only lower parts of your foreskin traditionally." (**FGD No.3-Adolescent boy, 18 years**)

A health care provider also added on parental decision-making regarding circumcision.
"*Decisions on child circumcision are made by parents, so parents who are aware about benefits of circumcision bring their children for circumcision earlier, but for those who believe in their traditional ways of circumcision they don't show up."* (**IDI No.2- Health care provider- 23 years**)

Traditions
From the interviews conducted with both young men and adults, they confessed that most of men do not want to be circumcised at health facility because they have their traditional way of being circumcised, where men are traditionally circumcised by removing only lower part of the penis foreskin, and some communities never circumcise their men altogether.

"*Most of tribes living in this area have their own traditional circumcision, majority of them especially Kurya tribe prefer traditional circumcision because of pride they get once they are circumcised, like circumcision ceremony and they get awarded some gifts."* (**IDI No.19-Male, 65 years**)

Another participant added on negative attitude on VMMC;
"Community attitude on voluntary male circumcision seems to be negative because this is not our culture but we are trying to cope with the situation because of health issues." (**FGD1-Male, 70 years**)

Another participant who was elaborating about Luo community attitude said;
"Circumcision doesn't mean anything to us because since way back we had our culture whereby our grandfathers were removing six teeth as their identity rather than being circumcised." (**IDI No.20—male (Pastor), 40 years**)

Another participant narrated that;
*"Few years back in some communities like Luo community it was very difficult to convince them to do circumcision because it is not their culture, this belief was passed from one generation to the next generation" (***IDI No. 17-Male,34 years***)*

Socio-economic factors influencing uptake of VMMC

Financial concerns

Participants mentioned family income as a challenge for them to do circumcision, because once you become circumcised you have to rest for more than six weeks waiting for wound healing without doing any activity. To address this challenge participants suggested the establishment of a minimum financial incentive package and some food to save their life during wound healing period.

"You can't compare income of a person living in town with us, that is why people fear to get circumcised because they don't know where to get money during wound healing period." (**IDI No. 12- health care provider, 32 years**)

"This service is free of charge so it depends on people's willingness to be circumcised and am sure that government is not charging any amount for circumcision, but people don't show up for these services because they are not assured of food to eat during wound healing period." **(IDI No.17- Male, 37 years)**

Contrary to VMMC being free, one participant claimed that;
*"There is a contradiction within the community because people do not understand if this circumcision is a project funded by a certain NGO or it is a government project, people need to know if the service is provided by NGO with any charges or free of charge. If they will get information that it is free of charge they can decide to be circumcised." (***IDI No. 13-Male (Traditional healer), 70 years***)*

Distance to health facility

Participants in this study reported health facilities location far from their settlement as a challenge for them to attend male circumcision procedure. Some of men do not have even access to bicycle as a means of transport which require them to walk for more than one hour to reach nearby health facility. Community health worker had this to say;

"We are living far from health facility, sometimes it becomes difficult even for those who are announcing circumcision services to reach us. I suggest that government should construct health facilities nearby people's settlements to simplify availability and accessibility of health care services." **(IDI No.19-CHW, 42 years***)*

Participant representing youths in focus group discussion had the same opinions as follows;

"*Once circumcision is done you will need to go home, but am living far away from the health facility where this service is provided, so how can I manage to walk back home?"* (**FGD3- Adolescent boy- 18 years**)

Fear of side effects

The possibility of some side effects soon after circumcision, for example penis pains, penis damage, excessive bleeding, and long wound healing period were mentioned by participants to be important influencing factors for them to refuse being circumcised. A participant who witnessed his friend refusing circumcision because of side effects associated with circumcision clarified that;

"*Some of them get scared once they hear that there is pain after the procedure which may cause erectile dysfunction." (***FGD1-Male, 70 years***)*

Another participant commented that;
*"Male circumcision is not Luo's culture, but sad enough is when we think about those pains we will get after the procedure. Moreover, our neighbors (Kurya) were mocking us that men are not supposed to be circumcised at health facility, they should be circumcised traditionally with knife" (***IDI No. 14-Male local leader***)*

Adding on this, a community health worker said that;
"During our door-to-door education provision on health-related issues we get some challenges like people being scared of pain when nurses are removing foreskin and other side effects" (**IDI No.11-Adolescent boy, 18 years**)

Health care providers

Some participants complained of being insulted by VMMC providers when they visited health facility to get treatment for circumcision side effects like penis swelling. Explaining his disappointments, a tribal leader who was insulted narrated that;
"Despite of all factors mentioned, health care providers are also very arrogant. I remember one day when I brought my son who had penis swelling symptoms after being circumcised, the doctor ignored me with some insults." **(IDI No. 1-male, 60 years)**

Another participant added;
*"I don't know if it is shortage of staff or people's attitude because sometimes, we go there but staff are few to deliver services needed." (***IDI No.12- Male, 55years***)*

Discussion

Majority of people in the community were aware of VMMC and its benefits. Health education interventions were mentioned as among the strategies assisting in raising community awareness on circumcision. The interventions involved different healthcare workers in providing education to the community. Participants provided an example of an intervention that was very successful in recruiting a large number of men in circumcision. The same approach was used in South Africa which

targeted spreading knowledge on circumcision for personal hygiene and protection from HIV and other STIs through voluntary medical male circumcision among adolescent boys (George et al., 2014). Similar to this finding, a study conducted in Tanzania indicated that older adolescent boys with no comprehensive education on HIV were not circumcised (Prusente et al., 2019).

The findings further show that participants were excited with how messages were delivered using brochures, flyers, and music entertainment with very wide and fast reach because people were attracted to the intervention site. Aligning to this, a study done in Iringa on early infant male circumcision listed information accessibility through brochures, mass media, and other sources of information as among effective strategies to reach the community (Keetile & Bowelo, 2016).

Our study noted that most men from Luo tribe had negative attitude towards VMMC because they did not think it was a necessary procedure for them. A study conducted in Tanzania about perceptions on male circumcision as a prevention measure against HIV infection, observed that men were reluctant to be circumcised because they were not aware of male circumcision benefits (Osaki et al., 2015). Similarly, a study conducted in Malawi pinpointed that men were not interested with VMMC because they were not aware of the benefits obtained from the procedure (Masese et al., 2021). These findings underscore the importance of providing ongoing and comprehensive education to communities on VMMC benefits.

Misconceptions surrounded negative attitude and non-acceptance of circumcision within the Luo community. Some people feared their foreskin could be used by traditional healers for witchcraft. The misconception contributed to men's decision towards VMMC. Similar to our findings, a study conducted in Uganda identified a misconception related to VMMC that, a man circumcised in a hospital would produce fewer children due to the anesthesia injection (Phega Mangena et al., 2011). Furthermore, some men believe that circumcision will cause loss of male fertility (Mahule, 2016).

Our study also noted that stigma and discrimination to men who are not circumcised and those who get circumcised at adult age attributed to both refusal of male circumcision and acceptance of male circumcision. We found that students from Rorya who were selected to join schools in other regions were stigmatized by their fellow students which influenced them to get circumcised but for adults, discrimination and stigmatization made them scared to get circumcised fearing their privacy. Studies with findings matching to this include a secondary data analysis done in Tanzania using Tanzania HIV Impact Survey (National Bureau of Statistics, 2018) which indicated how uncircumcised adolescents were stigmatized and discriminated by their peers. Another study conducted in Zambia to identify barriers to voluntary male circumcision, suggested that peer pressure among adolescent boys influenced them to be circumcised in order to fit in with their peers (Bendera et al., 2022).

Furthermore, this study discovered that parent's power in decision making has a greater role for youth's decision about circumcision. Youths living with parents or guardians who are against circumcision seemed to be reluctant to take up VMMC, but for those who had support from their parents got circumcised earlier before puberty stage. This finding further supports a study conducted in Iringa on bringing early infant male circumcision information home to the family, which found that it was difficult for some fathers who had undergone traditional circumcision to consent their sons to be circumcised using modern methods (Gikunju et al., 2014). Furthermore, a study done in Botswana has shown that when parents disagree about child circumcision, their decision not to circumcise tended to predominate (Keetile & Bowelo, 2016).

When it comes to socio-economic factors influencing uptake of VMMC, both adolescent boys and adult men who were living far from a health facility experienced obstacles to reach a health facility. Some of them complained about cost to reach a health facility and transport as reasons for their delays in taking up VMMC. Similar findings related to health facility location were obtained from a study done in Zimbabwe, whereby men who were uncircumcised complained about health facilities being located far from their settlements causing them to incur extra cost for the service (Osaki et al., 2015)

Our study also revealed majority of people living in these rural communities were low-income earners, relying on daily activities for them to survive. Thus, it was difficult for them to be circumcised because they feared how they will survive during wound healing period. Aligning to this theme, a study conducted in Uganda proposed that economic factors particularly disruption of daily livelihood is among factors which discourage low-income earners like *bodaboda* men to take up VMMC because they are not sure about their economic survival throughout the post-circumcision healing period (Wambura et al., 2011).

Moreover, fear of side effects soon after circumcision, for example penis pain, penis damage, excessive bleeding, and long wound healing period were important influencing factors for men to refuse circumcision. Similar to this finding, a study done on nurse's experiences with caring for circumcised clients, observed that many men fear pain, which they associated with male circumcision (MoHCDGEC, 2016).

Community awareness, culture, and socio-economic factors influence VMMC. Hence, VMMC interventions tailored to address these factors may pave way for successful provision of VMMC for HIV prevention in northern Tanzania. These interventions should incorporate cultural aspects in their strategies to make easier communication with majority of people in rural areas, involve local leaders, and other influential people within the community, provide community health workers with training on VMMC to equip them with sufficient knowledge to deliver within the community and initiate outreach programs on VMMC.

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