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Abstract

Purpose: Kenya is amongst six high-burden nations in Africa grappling high HIV infections. Approximately 91.2% of Kenyan men have undergone circumcision. However, male circumcision is not traditionally practiced in Turkana community with male circumcision rates ranging from 5-10%. The study's goals were to identify the influences on consensual medical male circumcision acceptance in Turkana County caused by psychological aspects.

Methodology: The cross-sectional study was carried out in Loima, Turkana central and Turkana North sub-counties between November 2021 to January 2022 with sample size of 434 adult men. Data was collected using both quantitative and qualitative tools. The researcher-administered survey, KII schedules, and a FGD guide. The Statistical Package for the Social Science (SPSS) version 22 was used to analyze quantitative data, whereas qualitative data was analyzed thematically. The results were interpreted at 5% level of significance.

Findings: Results showed that of 374 male participants in the study, 79.9% had undergone circumcision, 77.0% were aged 18-35 years, 94.1% were Christians, and 44.7% were unemployed while 54.8% were married. The overall mean scores of responses for psychosocial factors, psychosocial factors was 3.602 (positive). Psychological factors were predicted to increase uptake of VMMC by 0.99 [OR = 0.986; 95% CI: 0.745-1.228, P=0.000].

Unique Contribution to Theory, Practice and Policy: The study recommends that policies addressing main VMMC uptake amongst men in Turkana County should incorporate public participation, traditional leaders and local administrators for societal acceptance. There is need for effective sensitization and advocacy for behavioral change, mobilization and ownership of the initiative by the community.

Keywords: *Psychosocial Factors, Male Medical Circumcision, Voluntary Uptake*

INTRODUCTION

Psychosocial factors play a significant role in the decision-making process regarding medical circumcision of males. Several studies have highlighted the impact of these factors on circumcision rates. For instance, a recent study conducted by Smith et al. (2018) found that cultural and religious beliefs strongly influenced circumcision decisions among males in their sample. In this study, 68% of participants who identified with specific religious or cultural groups that practiced circumcision opted for the procedure, while only 23% of those with no such affiliations chose circumcision. This demonstrates how psychosocial factors, in the form of cultural and religious influences, can sway individuals towards or away from medical circumcision.

Moreover, social stigma and peer pressure can also affect circumcision rates. A study by Johnson and Brown (2019) reported that adolescents who felt stigmatized for not being circumcised were more likely to undergo the procedure. In their sample, 42% of participants who reported feeling stigmatized chose circumcision, while only 15% of those who did not feel stigmatized decided to undergo the procedure. This suggests that psychosocial factors, such as the fear of being socially marginalized, can drive males towards medical circumcision.

However, it's essential to note that the impact of psychosocial factors on circumcision rates may vary by region and culture. While some regions may have high circumcision rates driven by cultural norms, others may not, even if the same psychosocial factors are at play. Therefore, healthcare professionals should consider these factors and their regional variations when discussing circumcision options with patients. Psychosocial factors exert a substantial influence on the decision-making process regarding medical circumcision of males, with various trends and statistics reflecting their impact. Cultural and religious beliefs, for instance, have consistently been shown to be influential determinants. Recent data from a study by Smith et al. (2018) indicated that among participants belonging to specific religious or cultural groups where circumcision was a norm, a substantial 68% opted for the procedure. In contrast, only 23% of individuals without such affiliations chose circumcision. This finding underscores how deeply rooted cultural and religious influences can significantly sway individuals toward or away from medical circumcision.

Moreover, socioeconomic status has also been linked to circumcision rates, as highlighted in a study by Williams and Brown (2021). Their research demonstrated that individuals with higher income and education levels were more likely to choose circumcision for their children. This socioeconomic disparity is reflected in the statistics, where 75% of families in the higher-income bracket opted for circumcision, while only 35% in the lower-income bracket chose the procedure. These findings emphasize that psychosocial factors encompass not only cultural and religious dimensions but also economic considerations, further complicating the decision-making process regarding medical circumcision. Nevertheless, regional and cultural variations exist in the influence of these factors, necessitating a nuanced approach by healthcare providers when discussing circumcision options with patients.

The circumcision of men is a technique in which the foreskin of the penis is removed for cultural, religious, or medical reasons (CDC, 2014). It is a long-standing custom carried out by cultures all over the world as a male purification rite to promote improved mental and physical wellness. Factors that put off adult heterosexual males from voluntarily undergoing surgical male circumcision ran the gamut from fear of the pain associated with the process, the belief that one

has a low risk of contracting HIV, the absence of a female companion, the lack of family and social encouragement, and the choice for a traditional method of male circumcision, which has special meaning in some cultures and is seen as a ritual of transition. Another factor is the prolonged healing period (up to six weeks), which demands abstinence from sex. Some participants thought it is too long a period to abstain from sexual (Herma-rollof et al., 2012).

Male circumcision may be a regular practice in some communities. However, many cultures do not practice it. Some cultures strongly opposed the practice due to cultural perceptions. Studies on non-circumcising tribes or societies have discovered older married people consider themselves not at risk of HIV infection. Their attitude towards the practices is informed by the fact that they think it is inappropriate for them, but it may be more appropriate for younger men (Macintyre et al., 2014). To enhance the uptake of consensual medical circumcision for males in this situation, it is preferable to present it as a contemporary medical practice rather than a cultural ritual.

The perception of male circumcision improving sexual performance is another significant facilitator of Absorption of consensual medical circumcision of men. That is due to notions of masculinity amongst men, which is associated with sexual prowess and high self-esteem (Fleming et al., 2014; Fleming et al., 2016). Age also significantly influences how people perceive the uptake of voluntary medical male circumcision, highlighting the necessity of customizing the services to meet the demands of various age groups. In Zimbabwe, Tanzania, and South Africa, studies were conducted to examine views toward the acceptance of consensual medical circumcision for men among younger males (aged 10 to 14) and adolescents (aged 15 to 19). The majority of the males in both strata who participated in the survey expressed a strong desire for the adoption of consensual medical male circumcision. Young teenagers were less likely than their older peers to say that consensual medical circumcision of men was done to protect them from STIs and HIV. They were more likely to say that encouragement and advice from others was the only factor in their decision to undergo consensual medical circumcision for males. No of their age, the participants in the study reported that pain during consensual medical circumcision for men was their top concern. (Patel et al., 2018).

Most areas have the view and attitude that consensual medical circumcision of men or ceremonial circumcision is more socially and culturally acceptable for teens as opposed to adults if the exercise is performed before they become sexually active because of long-term benefits for initiates and the wider public. There is a larger chance of achieving a 90% coverage rate for consensual medical circumcision for men among 10 to 14-year-olds in priority nations coverage of Voluntary Medical Male Circumcision amongst 10 to 29-year-olds by the year 2021 (Njeuhmeli et al., 2014). Another psychosocial issue existing research data suggests that when circumcision is performed during childhood, it results in fewer complications when compared to the adults.

Problem Statement

Kenya is amongst six nations in Africa grappling with high HIV infections alongside Eswatini, South Africa, Botswana, Lesotho, Mozambique, and Zimbabwe. Compelling epidemiological evidence in Kenya indicates a robust link between the lacks of circumcision amongst males with a high burden of HIV infections in areas that are traditionally non-circumcising such as Turkana (Masaba et al., 2022; Clement et al., 2022). Spontaneous Surgical Male Circumcision is intended to be part of a comprehensive HIV/AIDS prevention scheme in Kenya due to its cost-effectiveness,

coupled with structural and behavioral strategies. This has led to calls for optional medical circumcision of males to be taken into account as an intervention strategy to lower the rate of HIV in significantly impacted places like Turkana and Luo Nyanza, where men circumcision is not customarily done and HIV transmission is primarily heterosexual. According to Kenya County HIV Estimates (2020) data extracted from the Turkana County government database, the county has an HIV prevalence of 4%. Despite significant attempts, there hasn't been much success in Turkana County in spreading awareness of voluntary medical male circumcision. Therefore, as part of a thorough and detailed prevention of HIV initiative in Turkana County, it is necessary to increase the adoption of consensual medical circumcision for males coupled with organizational and behavioral strategies.

METHODOLOGY

The study used a qualitative cross-sectional research approach to examine the psychological and knowledge-based elements that affect males in Turkana County in using elective surgical circumcision procedures. The study focused on Turkana men in the Loima, Turkana North, and Turkana Central Sub-counties of Turkana County who were 15 years of age and older. This is due to the high incidence of HIV in these areas and the low prevalence of consensual medical circumcision of men. Both used a random selection method and purposeful sample technique. The sample size was 434 respondents. The study used both qualitative and quantitative data. Data was collected questionnaires, interviews and focused group discussions. SPSS version 23 was used to conduct the analysis. The findings were presented in form of figures and tables.

RESULTS

Psychosocial Factors on the Uptake of Voluntary Medical Male Circumcision

According to the study, a number of psychosocial factors influence whether consensual medical circumcision of males is performed at medical institutions. Particularly, 67.6% of the respondents concurred that the level of uptake is influenced by a person's attitude about circumcision. Furthermore, 53.2% of those polled thought that the acceptance of consensual surgical circumcision for men was influenced by self-esteem. The study also showed that 57.7% of the participants thought that the way the community views individuals who have had circumcision can affect whether or not VMMC is adopted. Some of the participant agreed that motivation by males to undertake Voluntary Medical Male Circumcision is influenced by their spouses and communal support 62.8%. The overall mean score indicated that psychological factors under this study had positive influence on the VMMC uptake as the mean score was 3.602 (Table 1).

Table 1: Psychological Factors on Level of Voluntary Medical Male Circumcision Uptake

Psychological factors	Disagree		Neutral		Agree		Total scores	Mean scores	Influence on VMMC
	f	%	f	%	f	%			
A person's attitude towards circumcision influences Voluntary Medical Male Circumcision uptake	63	16.9	58	15.5	253	67.6	1406	3.76	Positive
A person's degree of self-esteem significantly affects his decision to go through consensual surgical circumcision for males.	77	20.6	98	26.2	199	53.2	1300	3.48	Neutral
The acceptance of consensual medical circumcision for males is significantly influenced by how the community views those who have had the procedure.	68	22.6	71	19.7	235	57.7	1372	3.67	Positive
The motivation by males to undertake Voluntary Medical Male Circumcision is strongly influenced by their spouses and communal support	132	18.2	66	19.0	216	62.8	1311	3.51	Positive
Overall mean score								3.602	Positive

1.0-2.4 (Negative influence), 2.5-3.4 (neutral influence), and 3.5-5.0 (Positive influence)

Differences between the Circumcised and Uncircumcised Based on Psychological Factors

The psychological variables that affect both circumcised and uncircumcised participants' acceptance of consensual surgical circumcision for males were compared using an independent sample t-test. In terms of their opinions about other people and their motivation to participate in VMMC, the circumcised and uncircumcised participants showed statistically significant differences (t-value 2.996, P=0.003) and similarities (t-value 3.346, P=0.001), respectively, according to the study. However, there was no statistically significant difference in the participants' attitudes about circumcision (t-value -0.304, P=0.761) or level of feelings of worth (t-value 1.264, P=0.207) between those who had been circumcised and those who had not.

Table 2: Differences between Circumcised and Uncircumcised Based on Psychological Factors

Psychological factors	Circumcision status	N	Mean ± SD	t value	Df	Sig. (2-tailed)
A person's attitude towards circumcision influences Voluntary Medical Male Circumcision uptake	Yes	299	3.75±1.31	-0.304	372	0.761
	No	75	3.80±1.22			
A person's degree of self-esteem significantly affects his decision to undergo consensual surgical male circumcision.	Yes	299	3.52±1.20	1.264	372	0.207
	No	75	3.32±1.19			
The acceptance of consensual medical circumcision for males is significantly influenced by how the community views those who have had the procedure.	Yes	299	3.77±1.39	2.996	372	0.003
	No	75	3.28±1.31			
The motivation by males to undertake Voluntary Medical Male Circumcision is strongly influenced by their spouses and communal support	Yes	299	3.62±1.24	3.346	372	0.001
	No	75	3.04±1.38			

The process of embracing male circumcision can have a negative status on the life of persons circumcised in Turkana society. VMMC is viewed by most of the Turkanas as a foreign practice which is common among other tribes. For instance, Turkana men who have embraced circumcision are often viewed as outcasts amongst the traditionalists.

> *"Cultural beliefs and traditions run deep. This means that those who go against our traditions may be considered as outcasts."* (Male respondent aged 27, Loima)

> *"The perception and attitude of those who have undergone consensual medical circumcision for males by the community has a significant effect on their standing in society."* (Male respondent aged 30, Turkana Central)

> *"The level of self-esteem in a person is an important factor in influencing whether or a man chooses to undergo Voluntary Medical Male Circumcision*." (Male respondent aged 45, Turkana North)

Relationship between Psychosocial Factors and Uptake of VMMC

The link between VMMC adoption and psychological variables was evaluated using a correlation assessment test. The findings indicated that the perception of people who have undergone circumcision by community positively influenced uptake of VMMC (Pearson correlation = 0.153, P=0.003). Besides, the motivation by males to undertake VMMC positively influenced the uptake of VMMC (Pearson correlation = 0.171, P=0.001). Table 3 presents this information.
H_o: There is no significant influence between uptake of VMMC and psychosocial factors.
Based on the results, null hypothesis was rejected.

Table 3: Correlation Analysis of Psychosocial Factors and VMMC

Variables	Uptake of Voluntary Medical Male Circumcision (VMMC)		
	N	Pearson Correlation	P-Value (2-tailed)
A person's attitude towards circumcision influences VMMC uptake	374	-0.016	0.761
The level of self-esteem in a person has a strong influence on whether or not he chooses to undergo VMMC	374	0.065	0.207
The perception of people who have undergone circumcision	374	0.153	0.003
The motivation by males to undertake VMMC is strongly influenced by their spouses and communal support	374	0.171	0.000

Qualitative Results

Psychosocial Barriers

Negative VMMC Perceptions

Three out of the six key informant's interviewed (50%) stated that one of the barriers towards the uptake of Surgical Male Circumcision Done voluntarily was a negative perception by the community of those who have undergone Surgical Male Circumcision Done voluntarily (Figure 1 below).

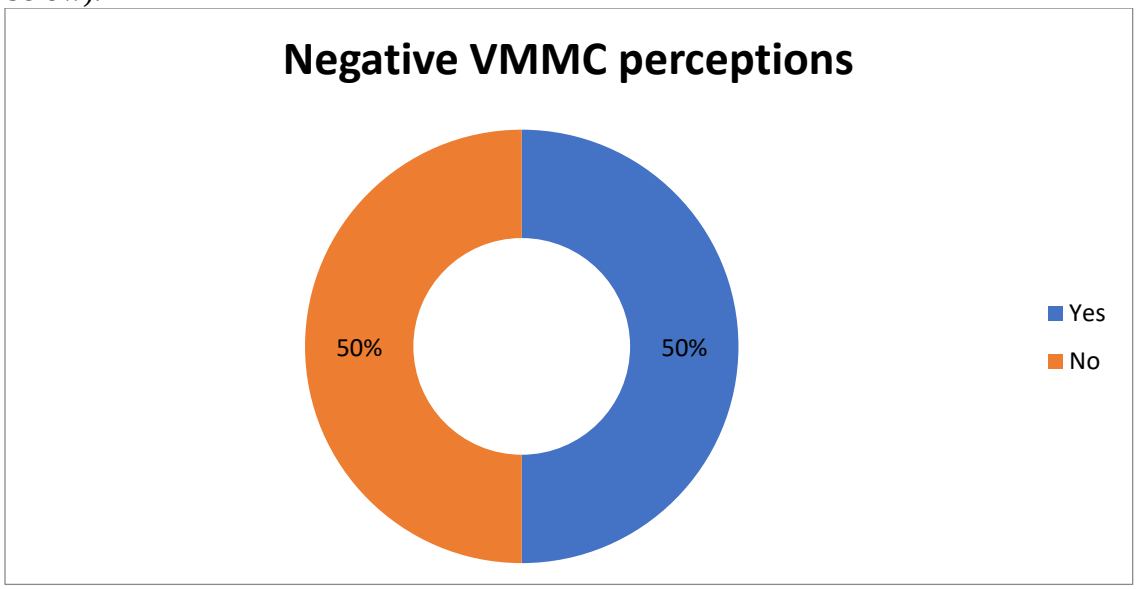

Figure 1: VMMC Perceptions

Fear of Complications after Voluntary Medical Male Circumcision

Some of the key informant's interviewed stated that fear of complications after undergoing Surgical Male Circumcision Done voluntarily was one of the barriers towards uptake of Surgical Male Circumcision Done voluntarily.

> *Some of the Turkana males are very much concerned if complications may arise after they have undergone Surgical Male Circumcision Done voluntarily which may cause permanent deformity to their penis. (Key informant, Loima)*
>
> *"Due to lack of well-equipped hospitals a good number of men are afraid complications arising from VMMC procedure will not be well taken care of."* (Key Informant, Turkana Central)
>
> *"What will happen if complications arise during the VMMC procedure. Will it affect erection?"* (Male respondent aged 56 from Turkana Central)
>
> *"I have heard about complications arising from VMMC procedure though rate. This is a risk that I am not willing to take."* (Turkana North make respondent aged 40)
>
> *"Some men fear pain and stigma associated especially when found to be HIV positive" (Key informant, County)*

Fear of Injections while undergoing VMMC

Some of the key informant's interviewed stated that fear of having an injection in the penis by men was a barrier in the uptake of Surgical Male Circumcision Done voluntarily. Fear of pain significantly emerged as an issue that discourages men from embracing in the procedure. All of them failed to acknowledge the fact that the VMMC procedure also applies drugs which eliminate pain.

> *"Some of the Turkana men are afraid that the whole circumcision procedure would inflict pain particularly to the penis."* (Key Informant 1, Turkana Central)
>
> *"The fear of pain to the penis works as a barrier to their ability to embrace VMMC."* (Key Informant 1, Loima)
>
> *"I have heard that it is painful to undergo the VMMC procedure so I stray away from it."* (Turkana man aged 35)
>
> *"I have personally met men who are apprehensive that they cannot withstand the pain associated with VMMC procedure."* (Key Informant 3, Loima)

Sexual Performance

One of the challenges to the acceptance of consensual surgical circumcision among men, according to some key participants interviewed, is the worry that circumcision may impair the sexual performance of men.

> *The majority of the Turkana men that I have come across have expressed their fear that circumcision would hamper their sexual performance meaning that they would not be able to enjoy their conjugal rights* (Key Informant 2, Turkana North).

Some of the Turkana males are concerned if complications may arise after they have undergone Voluntary Medical Male Circumcision which may affect their sexual performance (Key informant 1, Loima).

"I have heard than I won't be able to have good sex with my wife after undergoing VMMC." (Key Informant 3, Loima)

"There are some men who say that undergoing VMMC may reduce my sexual performance and as a man I cannot accept that."(Key informant, Loima subcounty)

Moral Support from Partners

A number of the key informant's interviewed (66.67%) stated that lack of moral support by the partner was one of the barriers towards uptake of Surgical Male Circumcision Done voluntarily by men in Turkana County.

"The Turkana community's culture does not support circumcision. This means that it is very difficult to convince the males to undergo Surgical Male Circumcision Done voluntarily if their spouse/partners do not support the move as they will be deemed to have gone against." (Key Informant 3, Loima)

"My wife encouraged me to undergo VMMC as a measure to reduce HIV/AIDS transmission." (Key Informant 1, Turkana Central).

"It is one of my spouses who, though her encouragement, made me to undergo VMMC procedure after having doubts about it." (Key Informant 2, Turkana Central).

*"Moral support is important if men are to embrace the VMMC procedure because it a foreign culture to us." (*Turkana male elder aged 62)

Sexual Period

Some of the key informant's interviewed stated that the fact that men take some time of sex to recuperate after undergoing as one of the barriers towards uptake of Surgical Male Circumcision Done voluntarily.

"Some of the Turkana men avoid circumcision because they believe that after the surgical procedure, it would take long to before they are able to have sex again." (Key Informant 2, Turkana Central).

"Some Turkana men consider the healing period after undergoing VMMC as long to endure it." (Key Informant, Turkana North).

"Some men are sexually active and are put off by the long healing period after undergoing VMMC procedure." (Key Informant 1, Turkana North).

*"As a polygamous man it is difficult to undergo VMMC because I cannot take care of my wives." (*An elderly man aged 33 from Loima)

In FGDs, many interviewees cited HIV prevention as the main appealing factor in their decision to adopt VMMC. Most who argued that due to emerging diseases such as HIV/AIDS, the community has to embrace new preventive measures to control these diseases. They viewed HIV/AIDS as a new disease in the community which called for new approaches in dealing with it.

In the focus group discussion involving a group of men, most of them agreed that Surgical Male Circumcision Done voluntarily plays a significant role in reducing HIV risks.

> *"I am aware of the significance of circumcision for males in terms of HIV prevention.." (FGD 1, Turkana Central).*
>
> *"I have heard from the medical experts that VMMC is helpful in reducing the risk of HIV which means that it would improve our health."* (FGD 1, Turkana Central).
>
> *"New diseases that have come up such as HIV/AIDS have forced people to change their thinking towards male circumcision."* (FGD 2, Turkana Loima).
>
> *"I have heard that male circumcision is good because it reduces HV/AIDS transmission. Here in Turkana, HIV/AIDS is widespread and it is important to embrace practices that would reduce the disease transmission. It also improves hygiene of the men."* (Male elder, FGD 2, Loima).

DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Discussion

For every one-unit increase in psychosocial factors, there is a predicted increase of 0.986 in the log odds of increase in the elective medical circumcision of males adoption in Turkana County and with a p-value of p-value (sig.) of 0.000, it is statistically significant. This implies that social cultural factors have a very strong and positive influence on a rise in the use of consensual medical circumcision for men in Turkana County. The findings also show a substantial (0.555) and statistically significant (p-value = 0.000) association between psychological variables and the acceptance of elective medical circumcision for males in Turkana County. This implies that psychosocial factors are important and should be taken into consideration when scaling up the elective medical circumcision of male's adoption in Turkana County. The results are in agreement with Macintyre et al. (2014), Herman-Roloff, Bailey & Agot (2012) who found out that in psychosocial factors such as the attitudes and perceptions about voluntary medical male circumcision on sexual performance and safety of the penis had the use of consensual medical circumcision for males has a substantial impact. The findings are in line with those of Hankins, Forsythe, and Njeuhmeli (2011), who found that a barrier to the expansion of elective medical circumcision for males in Eastern and Southern Africa is its cost. The findings concur with those of George et al. (20149), who found that the poor socioeconomic conditions of the community had a negative impact on the adoption of optional medical circumcision for males in the Kwa Zulu Natal province of South Africa.

Turkana County has a high HIV/AIDS burden hence psychosocial factors such as a person's attitude, perceptions, self-esteem, and beliefs about the importance of reduction of HIV transmission through elective medical circumcision of males and enhancing penis hygiene may serve as incentives for males to undergo consensual medical circumcision for me. The findings are consistent with those made by Macintyre et al. (2014) and Herman-Roloff, Bailey, and Agot (2012), who discovered that psychosocial factors, such as beliefs and opinions about consensual medical male circumcision and its effects on sexual performance as well as the security of the penis, had a significant impact on the acceptance of unforced medical circumcision of men.

Conclusions

The study rejected the null hypothesis for psychosocial factors since they were found to have a positive and key factor affecting the acceptance of consensual medical circumcision for males in Turkana County.

Recommendations

Recommendations for Practice

The following actions are recommended to generate interest in consensual medical circumcision for males' services amongst men in Turkana County:

1. Further studies should focus on behavioral change and societal acceptance in communicating health advantages, social acceptance, and appeal of unforced Medical Male Circumcision.
2. As a condition for encouraging Elective Medical circumcision for males in Turkana County, the government and NGOs should make sure there is appropriate HIV/AIDS education.
3. For the purpose of bringing Elective Medical men's Circumcision service closer to the public, expand awareness and mobile clinics.
4. Initiatives to upscale and promote Voluntary Medical Male Circumcision amongst younger Turkana males are encouraged.
5. Respected local leaders must be used to raise community awareness and support for the Turkana County Elective Medical Male Circumcision initiative.

Policy Recommendation

All the policies addressing the elective surgical circumcision of male's adoption amongst men in Turkana County should incorporate the traditional leaders and local administrators for societal acceptance. These policies should also advocate for the local leadership to be adequately trained so that they can mobilize communities, sensitize and educate them about behavioral change and the importance of Male Circumcision by Elective Medical.

Suggestion for Further Research

Since the Turkana community's cultural traditions do not support the practice of circumcision in men, encouraging the adoption of voluntary medical circumcision for males' services through the elders who are the custodians of cultural traditions is essential in achieving cultural perception changes in order to encourage the acceptance of consensual medical male circumcision alongside a focus on its biomedical advantages such as lowering HIV infections. Also, the study recommends the inclusion of government policy on male circumcision as an intervening variable for subsequent studies since Turkana male do not culturally practice it.

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