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Uptake and Factors Affecting Utilisation of Safe Male Circumcision Services in Walukuba, Jinja City

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ABSTRACT

Throughout the world, it has been observed that HIV prevalence is generally lower in populations that practice male circumcision than in populations where most men are uncircumcised. Currently, SMC is a proven cost-effective intervention for reducing the risk of sexual transmission of HIV/ AIDS. To assess the uptake of safe male circumcision services and its associated factors in Walukuba Division, Jinja district. This study used a cross-sectional study design which was conducted in Kauga-Nsuube village, Mukono district. It involved 138 people above 18 years living with dogs at homes. The questionnaires were used to collect information from them which was entered in SPSS for analysis. The analyzed results were presented in the form of pie charts and tables. The majority of males were not circumcised (79.5%) while only 20.4% of males were circumcised (used SMC). It was found that being a Muslim the odds of being circumcised by 4.4 when compared with Christians (aRR 4.4, 95%CI 1.25-15.35, P=0.02). On the other hand, study participants who didn't fear pain after circumcision were 5.3 times more likely to be circumcised than participants who feared pain after circumcision (aRR 5.3, 95%CI 2.58-49.46, P=0.001) The level of uptake of SMC services was low compared to global and national statistics. However, there are still some hindering factors to the uptake of safe male Circumcision among men aged 15-49 years. These include fear of pain and religion.

Keywords: HIV prevalence, Male circumcision services, Sexual transmission of HIV/ AIDS, Men aged 15-49 years, Equipped health facilities.

INTRODUCTION

HIV/AIDs is a major global public health concern and approximately 1 million people die each year from AIDS-related illnesses [1]. Most of the mortality resulting from AID related illness occurs in sub-Saharan where over 70% of the people with HIV live [2]. Ethiopia, Kenya, Tanzania, Uganda, South Africa, South Sudan, Rwanda, Burundi and Somalia take up 77% of the world's HIV prevalence [3]. Several strategies have been implemented in order to curb the spread of HIV including Safe Male Circumcision (SMC) [4]. Safe Male Circumcision (SMC) is the surgical removal of the penile foreskin or tissue, which covers the head of the penis performed by a trained health professional such as a doctor or nurse under safe conditions [5]. Throughout the world, it has been observed over the years of the HIV epidemic that HIV prevalence is generally lower in populations that practice male circumcision than in populations where most men are uncircumcised [6]. Currently, SMC is a proven cost-effective intervention for reducing the risk of sexual transmission of HIV (human immunodeficiency virus)/ AIDS (acquired immunodeficiency syndrome) [7]. Apart from the partial prevention of HIV transmission, SMC has been found to have other medical benefits which include improvement of personal hygiene, reduction of sexually transmitted infections such as genital herpes, syphilis and Chlamydia, prevention of penile cancer, prevention of balanitis, prevention of paraphimosis, reduction in risk of urinary tract infections and reduction of cervical cancer risk in partners of

circumcised men [8]. Globally, it is estimated that 38% of the world's males aged 15 years or older are circumcised of which about 62% are Muslims residing mainly in Asia, the Middle East and North Africa, 0.8% are Jewish and 13% are non-Muslim and non-Jewish men living in the USA [9]. This reflects the historical association of Male Circumcision (MC) with religious and cultural practices. However, SMC has been increasingly adopted in many parts of the world [1]. In Africa, especially in Northern and Western regions, MC is almost universal. However, its' uptake in other parts varies considerably with low uptake reported in the African countries as 21% in Malawi, 35% in South Africa, 48% in Lesotho, 20% in Mozambique and more than 80% in Angola and Madagascar [2]. In East and Central Africa, the prevalence of SMC varies from almost 15% in Burundi and Rwanda to 70% in Tanzania and 93% in Ethiopia [2]. In Uganda, a male circumcision policy was issued and endorsed in 2010 in response to the WHO and UNAIDS' recommendation to Uganda to consider SMC as part of a comprehensive HIV prevention package [10]. However, according to national estimates from 2011, SMC prevalence among men aged between 15 to 49 years was 27% in 2018, but with high levels of willingness to be circumcised among uncircumcised men. Those who expressed willingness at the time also seemed to be the ones with the largest need for protective measures [10].

The World Health Organization and the United Nations Program on HIV/ AIDS recommend SMC for countries with a high prevalence of HIV and a low prevalence of male circumcision [11]. As a result, Uganda has intensified SMC by adopting various methods leading to about 350,000 circumcisions out of the planned 1 million bringing the total coverage of SMC to about 35% [12]. Despite the tedious efforts to scale up SMC in priority countries like Uganda, the Ministry of Health in Uganda together with WHO and UNAIDS have failed to reach the timely targets due to poor response by men to use safe male circumcision services, especially in men where circumcision is not a tradition [13]. In addition, the Government of Uganda has met several resistances from elders in traditionally non-circumcising communities including the Busoga considering it to be an affront to the Busoga culture [10]. In the Walukuba division of Jinja district, the available SMC services based in TASO and JRRH have not been utilized and this might be a result of little awareness about the importance of safe male circumcision and misconceptions about SMC among other reasons. This research, therefore, is intended to find out the gaps and provide a way forward to overcoming them.

METHODOLOGY

Study Design

I conducted a cross-sectional study where a sample was drawn representing the general population and employed a quantitative approach using a structured questionnaire.

Area of Study

The study was carried out in Walukuba Division one of the three sub-counties of Jinja district (Walukuba, Central, and Nalufenya), located in the eastern direction with an estimated population of 24614 people, 12353 being males and 12261 females. It has three parishes; that is, Walukuba west parish, Walukuba East Parish, and Masese Parish.

Target Population

Males aged from 15-49 years in Walukuba Division, Jinja city. This is because 15-49 years of age in males was found to have the highest prevalence of HIV/AIDS, most sexually active [14] and so this was considered a priority group.

Accessible Population

All permanent male residents of Walukuba Division aged 15-49 years who have stayed in Walukuba Division for more than five years and presented during the sampling period.

Study Population

Permanent male residents of Walukuba Division who met the inclusion criteria.

Inclusion Criteria

The study included all males aged 15-49 years.

Exclusion Criteria

i. Those who had stayed in Walukuba Division for less than five years (not permanent residents).
ii. Those who were too sick to participate.
iii. Those with mental illness.
iv. Those who did not consent.

Sample Size Estimation

The sample size was estimated using the modified Kish Leslie formula (2004)

$n=z^2pq/E^2$

Where n = desired minimal sample population (where the population is greater than 10,000)

z = the standard normal deviate (1.96 for 95% confidence interval)

p = proportion of the target population estimated to have a particular characteristic being measured (prevalence of SMC), d= degree of accuracy= 0.05, q= 1-p

The percentage of circumcised men in the central north is about 10% (Magala & Robert, 2016) Therefore p= 0.1, q= 1-0.1 = 0.9. Thus n= (1.96^2*0.1*0.9) ÷ 0.05^2= 138.98

Therefore, the minimum sample size for the study is 139

To cater for wrongly filled questionnaires I added 5% of the sample size

That is; 5% of 139= 27.8

Which are 28 people

Hence the sample size was 28+139= 167 participants.

Sampling procedure

I used a stratified random sampling procedure which involves categorizing members of a given population into groups (strata) and an independent simple random sample will then be drawn from each group. The three parishes of Walukuba Division; that is, Walukuba West, Masese and Walukuba East Parish were my strata and a random sample of males, 56 each from Walukuba West, and Masese Parishes, and 55 from Walukuba East were picked to make my sample size.

Independent Variables.

These were the variables affecting the utilization of SMC services which included; personal, cultural, health system-related and socio-economic characteristics.

Dependent variables

The dependent variable was the proportion of males who have undergone safe male circumcision.

Data Collection

Data was collected using standard structured questionnaires after a full explanation and getting informed written consent. The questionnaire was administered to a participant in a face-to-face interview in a quiet private place that was available in different households by the researcher who guided and translate where necessary.

Data Management.

Completed questionnaires were kept in water-proof file folders put under lock and key accessible to the researcher only. I had a data backup stored on different computers with different passwords.

Data Analysis

Data was edited and entered into Microsoft Excel, exported to a statistical software STAT version 12.0 and presented in tables. In bivariate analysis, the association between various independent variables and SMC were determined and significant association if p-value < 0.05.

Quality Control

The data collection process was closely monitored by the researcher to ensure that the questionnaires were filled correctly. Double data entry was done to ensure accuracy and hard copies were kept under a locker and key accessible to only the researcher.

RESULTS

Demographic characteristics of the participants.

Table 1: Table showing demographic characteristics

Demographic parameter		Frequency	Percentage
Age	15-24	72	43.1%
	25-34	61	36.5%
	Above 34	34	20.4%
Level of formal education	None	19	11.4%
	Primary	91	54.5%
	Secondary	49	29.3%
	Tertiary	8	4.8%
Marital Status	Married	38	22.7%
	Single	125	75.0%
	Divorced	4	2.3%
Religion	Protestant	46	27.5%
	Catholic	49	29.3%
	Muslim	15	9.0%
	Pentecostal	34	20.4%
	Others	23	13.8%
Tribe	Buganda	4	2.3%
	Bakiga	23	13.8%
	Bahima/banyarwanda	11	6.6%
	Munyankole	121	72.5%
	Others	8	4.8%

From the table above, the majority of the participants were aged 15-19 followed by 20-29 with 38.9% and 29.3% respectively. About 54.5% of the respondents had attained primary education, 29.3% were secondary graduates while 11.4% didn't have any formal and 4.8% had received tertiary education. Single men were the majority with 75.0%, and Christian faith formed the majority of participants with Catholics, Protestants and Pentecostals having mega percentages of 29.3, 27.3 and 20.4 percentages respectively. Banyankole formed the majority of participants with 72.7%, followed by Bakiga with 13.6%, while the rest were other tribes.

Level of uptake of Safe Male Circumcision services in Walukuba Division, Jinja district.

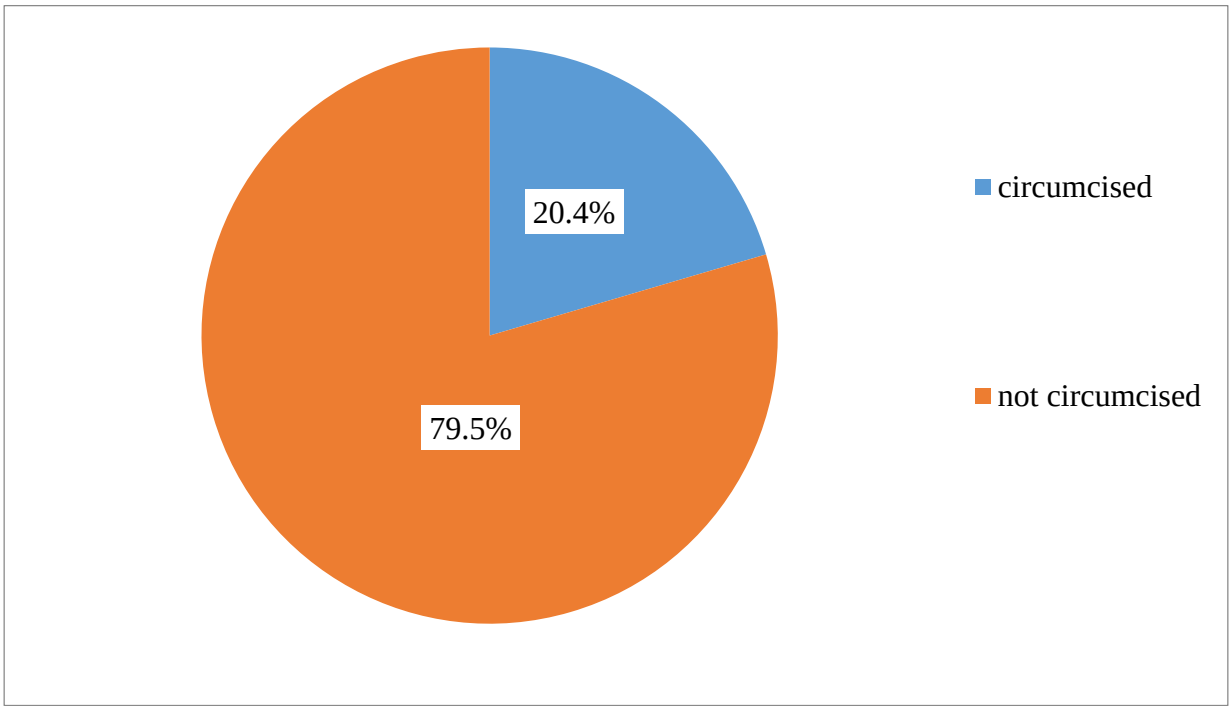

Figure 1: A graph showing the Level of uptake of Safe Male Circumcision services

The majority of males were not circumcised (79.5%) while only 20.4% of males were circumcised (used SMC).

Factors associated with uptake of Safe Male Circumcision services in Walukuba Division, Jinja district.

Table 2; bivariate logistic regression of factors associated with uptake of Safe Male Circumcision services in Walukuba Division, Jinja district.

Variables	Ever used SMC services		RR	95% CI	P-Value
	Yes				
Age					
<24 years	17	55	Reference		
25-34 years	8	53	1.0	0.32-3.23	0.969
≥ 35 years	9	25	1.7	0.40-7.24	0.478
Marital status					
Married/Cohabiting	11	27	Reference		
Single/divorced/widow	23	107	0.5	0.07-4.38	0.572
Religion					
Christians	14	115	Reference		
Muslims	**14**	**1**	**3.5**	**0.97-12.95**	**0.055**
Others	6	17	1.5	0.18-11.80	0.717
Education level					
None	7	12	Reference		
Primary	24	67	0.8	0.29-2.48	0.719
Secondary	2	47	1.3	0.34-4.99	0.702
Tertiary	1	7	0.2	0.03-1.79	0.259
The attitude of health workers					
Good, welcoming and friendly	13	90	Reference		
Bad, harsh, and rude	20	43	1.9	0.66-5.74	0.277
Fear of pain					
Yes	19	89	Reference		
No	15	44	**2.1**	**0.64-7.19**	**0.011**

P value = significant value, cRR= Crude Relative Risk, CI= Confidence interval.

Shown in Table 2 above is the result of the bivariate logistic regression which was run to determine factors associated with uptake of Safe Male Circumcision services in Walukuba Division, Jinja district. Results of the analysis revealed that religion and fear of pain had p-values less than 0.2. Thus, education proceeded to the next stage (multivariate stage).

Multivariate logistic regression to factors associated with utilization of family planning services among women of reproductive age (15-49) attending HRRH

Table 3: Multivariate logistic regression to establish factors associated with the utilization of family planning services among women of reproductive age (15-49) attending HRRH

Variables	aRR	95% CI	P-Value
Religion			
Christian	Reference		
Muslim	**4.4**	**1.25-15.35**	**0.021**
Others	6.5	0.71-59.67	0.097
Fear of pain			
Yes	Reference		
No	**5.3**	**2.58-49.46**	**0.001**

P value = significant value, aRR= Adjusted Relative Risk, CI= Confidence interval.

Table 3 shows a multivariate logistic regression analysis of factors associated with the uptake of Safe Male Circumcision services in Walukuba Division, Jinja district. Factors with a p-value less than 0.2 in relation to the uptake of Safe Male Circumcision services at bivariate logistic regression analysis were considered for multivariate analysis. It was found that being a Muslim the odds of being circumcised by 4.4 when compared with Christians (aRR 4.4, 95%CI 1.25-15.35, P=0.02). On the other hand, study participants who didn't fear pain after circumcision were 5.3 times more likely to be circumcised than participants who feared pain after circumcision (aRR 5.3, 95%CI 2.58-49.46, P=0.001).

DISCUSSION

Level of uptake of Safe Male Circumcision services

In this, the level of uptake of safe male circumcision was 20.4%. This is consistent with the SMC uptake rate of 21% in Malawi, and 20% in Mozambique [2]. It also lies within the range of 15% to 93% in African countries [2]. This is low when compared to 38% of the world´s males aged 15 -59 years who are reported to be circumcised [9]. It was also lower than the SMC uptake rate of 35% in South Africa, 48% in Lesotho, and more than 80% in Angola and Madagascar [2]. Also, a cross-sectional study that interviewed 136 students in the Ndola district of Zimbabwe found that 63% were circumcised, and of those, 96% were medically circumcised [15]. In Uganda, SMC prevalence among men aged between 15 to 49 years was 27% in 2018 [10]. Another cross-sectional study among 378 young men aged 15–24 years in Rhino Camp Refugee Settlement in Uganda found that the prevalence of safe male circumcision uptake was 42.1% [1]. However, it was high when compared to only 11.5% of men who were found to be circumcised in Australia [16]-[20]. It was also higher than the 10% who up took SMC in eastern Uganda [13]. This could have resulted from the study duration as much as change between 2008 and 2016 to date.

Factors associated with uptake of Safe Male Circumcision services

In this study, religion was significantly associated with SMC that Muslims the odds of being circumcised by 4.4 when compared with Christians. This finding is in line with a study done by [9] which showed that 62.1% are circumcised for

religious reasons and include the Jews or Muslims. In addition, religion is a major determinant of circumcision acceptability. MC is universally associated with the Islamic religion. It is also considered fundamental to some minority Christians and animist sects [16]. However, there is great variability in the religious perception of MC. This suggests that before MC was promoted in a country, it would be prudent to consult and collaborate with the religious leaders to learn the stance of various churches regarding MC. In several cases, churches can act as helpful advocates or obstructive opponents and may have a significant influence on the acceptability of MC [17]. Also in Uganda, the proportion of men circumcised differs significantly by religious status (97% of Muslim men vs 10% of catholic men) [18], [21]-[25]. In this study, fear of pain was significantly associated with SMC that is participants who didn't fear pain after circumcision were 5.3 times more likely to be circumcised than participants who feared pain after circumcision. This is consistent with results in a study done by [26]-[28] which showed that fear that undergoing safe male circumcision is very painful and uncomfortable reduced the likelihood safe male circumcision uptake by 25.8% [1],[19] showed that fear of pain increased the likelihood of safe male circumcision uptake by 7.09 [29].

CONCLUSION

The level of uptake of SMC services is low compared to global and national statistics. However, there are still some hindering factors to the uptake of safe male Circumcision among men aged 15-49 years. These include fear of pain and religion. Therefore, existing health facilities at different levels must be equipped with adequate and qualified human resources for health, and necessary equipment to address identified factors affecting the uptake of SMC as an essential tool or component in lowering the prevalence of HIV.

Recommendations

- I recommend the general population of Walukuba Division, Jinja district to utilize safe male circumcision services from health workers and health facilities within their locality in order to achieve this 60% risk reduction and avoid unsafe events associated with circumcision outside health facilities like nonuse of anaesthesia which cause a lot of pain, sepsis-associated to non-aseptic techniques and other adverse reactions related to circumcision that usually go unmanaged if it's done by cultural or religious leaders.
- I recommend that talk about circumcision and its availability in the facility to its clients in order to increase service demand by its clients thereby indirectly contributing to HIV control in Walukuba Division, Jinja district and Uganda at large.
- I recommend a community-based approach and community health staffing increment in Walukuba Division, Jinja district to avail advice and health education to people in the community regarding HIV and its control measures including safe male circumcision.
- More massive informative advertisements to be intensified in order to inform the population on circumcision services and where they can be easily and freely accessed by the general population in order to increase its utilisation ability.

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