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PREVALENCE OF VOLUNTARY MEDICAL MALE CIRCUMCISION AMONG MEN ATTENDING NAKIVALE HC III ISINGIRO. A CROSS-SECTIONAL STUDY.

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ABSTRACT.

Background:
Medical male circumcision is the surgical removal of the foreskin which covers the penis of a male human being. The study aims to determine the Prevalence of voluntary medical male circumcision.

Methodology:
A cross-sectional study employing quantitative measures. The study involved adult males who attend healthcare services at Nakivale Health Center III in the age bracket of 15 to 50 years. The data was exported to the IBM statistical package for Social Sciences (SPSS) version 20 software for analysis. Data was analyzed using percentages and frequencies for univariate and Chi-square for bivariate analysis.

Results:
The majority of the participants had received VMMC (65.2%) and received it from the health facility (68.8%). On age, the majority of subjects were aged between 18 to 39 years 106(76.8%) and the least were aged 40-49 years 14(10.1%), on marital status, most of the participants were single 68(49.3%) and the least were divorced 3(2.2%). The majority of the participants had attained a primary level of education (42.2%) and the least had tertiary education 13(9.4%). On occupation, most of the participants were students 39(28.3%) and the least were unemployed 16(11.6%), on religious affiliation most of the participants were protestant 50(36.2%) and the least were Muslims 10(7.2%).

Conclusion:
The majority of the respondents had received VMC from facilities most of whom were below 39 years preferably due to continued sensitization of communities.

Recommendations:
Independent stakeholders need to improve on sensitizing the society about VMMC through linking with nursing institutions to help in making up camps and outreaches and community education in these remote areas.

Keywords: *Prevalence, Medical male circumcision, Nakivale Health Center III*
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BACKGROUND

Medical male circumcision is the surgical removal of the foreskin which covers the penis of a male human being. Circumcision is believed to be one of the oldest and most common procedures which has been done for various reasons ranging from cultural rituals to religious, and medical purposes (Sgaier et al., 2014). Traditional male circumcision has been in existence even during the times of the Old Testament. In Uganda, the Bugisu region (eastern Uganda) is regarded as the birthplace of Traditional Male Circumcision (TMC). Common belief holds that the first male circumcision was performed in the region centuries ago (Sabet Sarvestani et al., 2012).

Voluntary safe male circumcision is widely recommended by both World Health Organization and UNAIDS an important step in HIV prevention in countries with a high HIV prevalence. Southern and East African countries-initiated programs to expand the provision of male circumcision with the estimated total number of voluntary medical male circumcisions in the 14 WHO priority countries from 2008 to 2017 was 18,581,880 (WHO, 2015). The sub-Saharan high-priority countries that have

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actively expanded safe male circumcision programs include Botswana, Ethiopia, Kenya, Lesotho, Malawi, Mozambique, Namibia, Rwanda, South Africa, Eswatini, Tanzania, Uganda, Zambia, and Zimbabwe (Elsayed, 2024). Ecological studies have shown that the countries in sub-Saharan Africa with the highest HIV prevalence are those in which MC is partially or not practiced. Uganda's scenario of uptake of safe male circumcision is not far different from other countries in the region, uptake is still low despite being free (Nanteza et al., 2018). Estimated Male Circumcision prevalence in southern and eastern sub-Saharan African countries with lower levels of Male Circumcision overall was heterogeneous in space and time. A target was set in 2012 to reach 80% Male circumcision coverage of men between ages 15–49 years by 2015 (MA Cork, 2020). Whereas most countries were still working towards meeting that coverage, a new target focused on 90% coverage in younger males ages 10–29 (MA Cork, 2020). The study aims to determine the Prevalence of voluntary medical male circumcision.

METHODOLOGY

Study design

This was a cross-sectional study employing quantitative measures. This design is appropriate because it helps the researcher to study phenomena at a particular point in time (Polit & Beck, 2010). Quantitative methods of data collection were employed. Quantitative methods help to study the numbers of a problem and to determine percentages.

Study setting

The study was conducted at Nakivale Health Centre III. This is a health facility in the Isingiro district that serves several native Ugandans and thousands of refugees from neighboring countries. Isingiro District is located in southwestern Uganda 37 Kilometers southeast of Mbarara city, the second-largest city in Uganda. Nakivale Health Center is 50 kilometers from Mbarara city which is almost an hour's drive. Isingiro borders Tanzania in the south, Rakai, and Mbarara.

Study population

The study involved adult males who attend healthcare services at Nakivale Health Center III in the age bracket of 15 to 50 years.

Eligibility

Inclusion criteria

All adult males between the ages of 15 to 50 years willing to participate in the study were recruited.

Exclusion criteria

The study excluded adult males between the ages of 15 to 50 years who were very ill, those who declined consent and were absent during data collection, and those who were already circumcised.

Sample Size Determination

The sample size was estimated by Kish and Leslie's standard formula (1965), N= Z2PQ/E2.Where N is the sample size, Z is the score responding 95% of the confidence interval which is 1.96, and P is the percentage of participants who have ever done VMMC in a study that was done by Nanteza et al., (2018)was estimated to be 0.694. Q=1-P=1-0.694=0.306
E=Level of error expected which is 0.05 N= (1.96)2 x 0.05 (0.5)/0.052, N=326

The study was adjusted for finite population as follows; Fisher et al. (1998)
nf=n/(1+(n/N) Where; nf = desired sample for population < 10 000 n = desired sample size for population > 10 000.
N = number of adult males who attended Nakivale HCII in the last two months (200)
nf =326/ (1+(326/200)) and nf =15124.4 thus, 124 adult males aged 15-50 years shall be considered.

Sampling technique

Consecutive sampling was used to get the study participants. The researcher included all the adult males aged 15-50 years who met the inclusion criteria and were conveniently available as part of the sample.

Data collection tools

Data was collected from participants using a researcher-administered questionnaire which was developed from the literature review. The questionnaire comprised a section for demographic characteristics, knowledge about VMMC, and socio-cultural factors associated with its uptake. The questionnaire was translated into the Runyankole local language for a better understanding of the participants.

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Data collection procedure

After obtaining ethical approval and all permission protocols, the researcher explained the purpose of the study to individual male participants in a conducive and private environment and asked them to consent to the study. Those who accepted and consented were subjected to a researcher-administered questionnaire that took about 15 to 20 minutes per participant. The researcher cross-checked for completeness of the questionnaire before releasing the participant. Afterward, the filled questionnaires were kept well in the researcher's bag only accessible to him.

Data management and quality control

The questionnaires were translated into Runyankole the local Language commonly used in the area. The questionnaires were pretested on 20 participants at Rwekubo Health Center IV also in Isingiro district. Questions that were found to be abstract were restructured or deleted from the questionnaire. The questionnaires were administered by the researcher to minimize errors. Questionnaires were cross-checked at the end of every interview and were kept safely to protect them from loss or destruction.

Ethical considerations

The proposal was approved by the University Research and Ethics Committee for Bishop Stuart University, an introduction letter was sought from the Nursing head of the department to seek permission from the relevant offices including the District Health Officer Isingiro district and Nakivale Health Center in charge. Consent was sought from each participant before data collection who was above 18 years and assent were sought from participants below 18 years of age.

Data analysis

The questionnaires were coded, entered in Microsoft Excel checked, and cleaned. The data was then exported to the IBM Statistical Package for Social Sciences (SPSS) version 20 software for analysis. Data was analyzed using percentages and frequencies for univariate and Chi-square for bivariate analysis.

RESULTS

Socio-demographic characteristics

Table 1: Socio-demographic characters

Variable	Category	N(%)
Age	18-29 years.	62(44.9)
	30-39 years	44(31.9)
	40-49 years	14(10.1)
Marital status	Single	68(49.3)
	Married	49(35.5)
	Divorced/ separated	3(2.2)
Level of education	No formal education	15(10.9)
	Primary	61(44.2)
	Secondary	31(22.5)
	Tertiary education	13(9.4)
Occupation	Civil servant	28(20.3)
	Self-employed/Businessman	37(26.8)
	Student	39(28.3)
	Unemployed	16(11.6)
Religion	Catholic	23(16.7)
	Protestant	50(36.2)
	Seventh-day Adventist	25(18.1)
	Moslem	10(7.2)
	Born Again Christians.	12(8.7)
Nationality	Ugandan	61(44.2)
	Tanzanian	13(9.4)
	Rwandese	34(24.6)
	Congolese	6(4.3)
	Sudanese	6(4.3)

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One hundred twenty-four (124) adult males were selected to participate in the study, and only one hundred twenty (120) adult males fully completed the study, yielding a response rate of 98.8%. On age majority of subjects were aged between 18 to 39 years 106(76.8%) and the least were aged 40-49 years 14(10.1%), on marital status, most of the participants were single 68(49.3%) and the least were divorced 3(2.2%). The majority of the participants had attained a primary level of education (42.2%) and the least had tertiary education 13(9.4%). On occupation, most of the participants were students 39(28.3%) and the least were unemployed 16(11.6%), on religious affiliation most of the participants were protestant 50(36.2%) and the least were Muslims 10(7.2%). On the nationality most of the participants were are Ugandans 61(44.2%) and the least were Sudanese 6(4.3%) and Congolese 6(4.3%) (Table1).

Prevalence of voluntary male medical circumcision

Table 2: Prevalence of voluntary male medical circumcision

Variable	Category	N(%)
Received Voluntary Medical Male Circumcision	Yes	90(65.2)
	No	30(21.7)
If yes, where did you get it from	Health facility	62(68.8)
	Outreach	17(18.8)
	Camp	11(12.2)

This study results revealed that most of the participants had received VMMC (65.2%) and received it from the health facility (68.8%)

DISCUSSION

Prevalence of voluntary medical male circumcision among men attending Nakivale HC III

Voluntary medical male circumcision (VMMC) is a low-cost, minimally invasive procedure that offers several benefits to recipients, including reduced risk of the transmission of sexually transmitted infections (STIs). This uptake of VMMC recorded in this study is due to increased sensitization by the health workers and also increased outreaches on VMMC done at the facility with funding from the UNHCR. In this study, more than half of the participants had received VMMC and received it from the health facility. This study's results are higher than the pooled statistics of East and Central Africa (STAR-EC, 2016) and that reported in Mozambique (Hines et al., 2021).

This study's results are similar to the results in a study by (Hines et al., 2021) who expressed that between 2014 and 2019 there was a significant rise in circumcision prevalence among males aged 15–59 years. This difference in statistics can be explained by different geographic locations between two different countries, the settings of this study area which is more remote area compared to other studies that took place in urban areas, inhabitants of the area where some areas are dominated by cultures that do not support circumcision are likely not going to use it (Brito et al., 2019)

CONCLUSION

The majority of the respondents had received VMC from facilities most of whom were below 39 years preferably due to continued sensitization of communities.

RECOMMENDATIONS

Independent stakeholders need to improve on sensitizing the society about VMMC through linking with nursing institutions to help in making up camps and outreaches and community education in these remote areas.

LIST OF ABBREVIATIONS

HIV: Human Immunodeficiency Virus
VMMC: Voluntary Medical Male Circumcision
STI: Sexually Transmitted Infections
HC III: Health Center III
WHO: World Health Organization

SOURCE OF FUNDING

The study was not funded.

CONFLICT OF INTEREST

The author did not declare any conflict of interest.

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