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Safe Male Circumcision and HIV Prevention in Males in Bigando, Kigulya Division, Masindi Municipality.

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ABSTRACT

This study was designed to determine associated factors with uptake of safe male circumcision in HIV prevention in males aged 15-35 in Bigando Ward, Kigulya Division, Masindi Municipality. The study design was a descriptive cross-sectional study with a study population of 384 and the sample size was determine using Kish and Leshie's formulae of sample size determination and it came down to 117, however the response rate was 60. The findings revealed that; Knowledge was good as all the respondents, 60(100%) mentioned that they have heard about it mainly from the radio and health workers. Another factor that was hindering men from undergoing circumcision was their belief that it is associated with complications, with 42(70%) in agreement. The main complications mentioned were pains 32(70%) and bleeding 22(52.4%). The attitude towards circumcision was fair with 38(63.3%) saying it was good against 4(6.7%) that said it was bad. It is recommended that; Health education of the respondents on the advantages of circumcision especially on the fact that it has protective effects against HIV as to foster positive behavioral change, Government should possibly pay for all circumcision in private health facilities, Attitude towards SMC should be improved by regularly talking about it in all public places like markets, schools and churches etc. The circumcision camps should improve on the privacy of the clients that turn up for circumcision, promoting education of children in the study area so as to enhance a more literate population in the future that is more likely to embrace circumcision.

Keywords: HIV, male circumcision, Health education, infections

INTRODUCTION

Safe Male circumcision (SMC) is one of the oldest and most common surgical procedures in the world, and is undertaken for various reasons: religious, cultural, social, and medical [1]. The World Health Organization (WHO) estimates that 30% of all males 15 years and older in the world are circumcised. Of these, about two thirds (70%) are Muslims (resident predominantly in Asia, the Middle East, and North Africa), 13% are non-Muslim and non-Jewish men living in the United States of America, and 0.8% are Jewish [2][3][4][5][6]. SMC is less commonly practiced in sub–Saharan Africa. The percentage of circumcised men in Uganda is reportedly about 25%.

Based on compelling research evidence, WHO recommends that SMC be considered as an additional human immune-deficiency virus (HIV) prevention strategy for heterosexually acquired infections in men [2]. Following the endorsement of SMC as an additional HIV infection prevention strategy, initiatives to introduce safe voluntary medical male circumcision (VMMC) services commenced in 2008 in several sub-Saharan African (SSA) communities [3][7][8][9][10].

Safe male circumcision (SMC) services were commenced in 2009 in most districts of Uganda to raise its prevalence of to 80% among HIV- negative men aged 0-49 years. The effectiveness of this intervention depends on many factors, not the least of which is the extent to which SMC is accepted and taken up by the target groups [4][11][12][13].

The effects of the HIV prevention strategy of SMC are cumulative over a man's sexually active lifetime, and will therefore have most impact when implemented prior to sexual debut [4][14].

However, reliable preliminary statistical data from the human immune deficiency virus/ acquired immune-deficiency syndrome (HIV/AIDS) Monitoring and Evaluation Unit of the Uganda Ministry of Health (MOH) shows a low SMC uptake. It is reported at an uptake of 32 % which in Masindi Municipality which indicates that there could be barriers in the uptake of SMC. The question is: what barriers affect the uptake of SMC in Uganda and Masindi Municipality in particular (Masindi district) in particular where its uptake is estimated to be even at a rate of 32% that is even lower than the national average of 55%. Addressing this question will help policy makers to design effective SMC service programme implementation strategies to reduce the prevalence of HIV in the study area and country at large [15][16][17][18].

Problem statement

The number of people living with HIV/AIDS is increasing every day. In the 2007, the Joint United Nations report on HIV/AIDS reported that 33.2 million people were living with HIV/AIDS. Of these, sub-Saharan Africa bears the greatest burden, accounting for 68% of the people.

Evidence shows that SMC is a powerful HIV prevention tool. A number of observational epidemiological studies in different parts of the world have reported that SMC significantly reduces the risk of heterosexual transmission of HIV from women to men [4]. Randomized clinical trials (RCTs) conducted in Kenya, South Africa, and Uganda showed a 50-60% reduction in the acquisition of HIV infection in men following circumcision [5][19][20][21].

In Uganda, the ministry of health drafted the SMC policy in 2010 by including SMC as part of a comprehensive national preventive program. However, despite effort to roll up SMC circumcision countrywide, the 2016 UDHS indicates that only 55 % of men aged 15-45 are circumcised [22][23][24].

The situation is worse in Masindi municipality, where the percentage of circumcised adult males is estimated at 32%. The estimated 68% uncircumcised men are at a greater risk of HIV/AIDS, compelling the researcher to establish the factors associated with the low uptake of the services in SMC as an HIV preventive strategy in Masindi Municipality, Masindi district.

Aim of study

The main purpose of this study is to determine factors that are associated with low uptake of SMC as HIV prevention strategy among adult males in Masindi Municipality Masindi district, Western Uganda.

Specific Objectives

1. To explore and describe the socioeconomic factors that influences the uptake of SMC adult males.
2. To determine the knowledge of adult males on the importance of SMC as an HIV preventive strategy
3. To determine the perceptions of adult males towards SMC
4. To find out suggestions from the adult males the strategies that can be employed to increase the uptake of SMC in Masindi Municipality.

Research questions

In order to address the above research problem, the researcher will be attempted to answer the following research questions:

1. What is the knowledge of adult males on the importance of safe male circumcision?
2. What socio economic factors influence adult males to or not to undergo SMC?
3. What is the attitude of adult males in Masindi Municipality towards SMC?
4. What strategies can be put in place to increase the number of adult males undergoing SMC in Masindi Municipality?

Significance of the study

SMC is considered part of the comprehensive HIV prevention package for heterosexually acquired infections in

men [2] SMC is also said to be a cost-effective HIV prevention measure. Studies by [6][7][25][26] show that large-scale uptake of SMC in a population with high HIV prevalence and a low circumcision rate has a considerable impact on the HIV epidemic and provides a cost-effective HIV prevention strategy [6].

However, SMC uptake in Uganda is significantly low due to various unknown factors. Therefore, studying these factors will have a significant long-term impact on the control of the HIV epidemic.

The study is expected to contribute to existing knowledge about the key factors that influence SMC uptake young males.

METHODOLOGY

Study Area

The study was carried Masindi Municipality, Masindi district. This is an urban community and the major economic activity is small scale trading .The population has mixed characteristics ranging from educated and non-educated occupants and the main health problems are malaria, respiratory tract infections, diarrhea, HIV/AIDS as well as skin infections among others.

Study design

It was a descriptive cross-sectional study [8], described descriptive analysis as a method that involves asking a large group of people questions about a particular issue. Information is obtained from a sample rather than the entire populations at one point in time which may range from one day to a few weeks. Descriptive study design is preferred because it's easy and allows for quick data collection at a comparatively cheap cost [9] [[27] [28] [29].

Study population

The study populations were young males (15-35years); residents of Masindi Municipality, Masindi district.

Sample Size determination

The formular in [10] was used to determine the number of participants to be interviewed.

$$n = \frac{z^2pq}{d^2}$$

where n = sample size for a population greater than 10000

z = 1.96 corresponding to 95% level of significance

d = the error to be tolerated (0.05)

p = Expected population proportion of Masindi district adult circumcised 32% which is 0.32.

q = (1-p) = 0.68

d = margin of error 5% (0.05)

Therefore,

$$n = \frac{(1.96)^2 x\ (0.32 \times 0.68)}{(0.05)^2} = 334$$

Since the estimated number residential young males (15-35 years) according to the ward chairperson in the division of study is less than 10,000 ie it is about 143.

$$nf = \frac{n}{1 + n/N}$$

Where;

nf= desire sample size for population less than 10,000

n = calculated sample size for population greater than 10,000

N= Target population.

$$nf = \frac{384}{1+384/163} = 117$$

However, the response rate was 60 in other ward those who accepted to be interviewed

Sampling Technique

The ward was purposely chosen due to the reported low uptake of SMC. By simple random sampling, 3 cells (LCIs) were sampled out of the 11 cells in the division. From each ward, 20 adult males were selected by systematic random sampling. This was done by moving from household in which young males were being interviewed.

Inclusion and exclusion criteria

Inclusion criteria

All young males aged (15-35 years), resident in the parish that accepted to be interviewed were included.

Exclusion criteria

Nonresidents, children (less than15 years) and older men (above 35 years) and visitors (non-permanent residents) were not included.

Definition of variables

Dependant variables

The dependant variable was willingness or non-willingness to undergo SMC

Independent variables

These are variables that affect adult male's willingness to undergo safe male circumcision. They included the

- Social demographic characteristics like age, tribe religion education level and Marital status
- Knowledge of adult men about benefits of SMC
- Attitude towards SMC

Research instruments

The study instruments/tools used for data collection were interviewer administered questionnaires.

Data collection procedures

A structured and standardized questionnaire was used to collect and quantitative data using closed ended and open questions. The researcher collected data. Data was collected from participants after explaining to them the objectives and getting verbal consent.

Data analysis and presentation

Data was analyzed using excel and presented in percentage frequency distribution tables

Ethical consideration

This section describes how ethical requirements were upheld with special considerations given to human dignity. The major ethical issues that were safeguarded included; informed consent, privacy and confidentially, anonymity and a researchers' responsibility.

A research proposal was presented to the school of Allied health sciences for approval. Then the researcher was given an introductory letter that was presented to Masindi Municipal offices granted her permission to carry out the survey

Interviewers/ participants were adequately informed about the procedures of the study in which they were asked to participate. Information on purpose of the research, expected duration of participation any discomforts to participants was addressed.

Privacy and confidentiality were ensured. The questionnaire administered did not contain the participants name to ensure anonymity of participants.

RESULTS

Demographic characteristics.

Table 1: Age of the respondents (N=60)

Age (Years)	Frequency	Percentage (%)
15-20	06	10.0
21-25	30	50.0
≥26	24	40.0
TOTAL	**60**	**100.0**

Half of the respondents, 30(50%) were aged 21-25 years while 24 (40%) were aged 26 years or more.

Table 2: Ethnicity of the respondents (N=60)

Ethnicity	Frequency	Percentage(%)
Banyoro	32	53.3%
Batooro	16	26.3%
Acholi	04	6.7%
Batooro	04	6.7
Others	04	6.7
Total	**60**	**100**

Slightly more than more one half, 32(53.3%) were Banyoro, followed by Batooro who were 16(26.7%).

Table 3: Marital status of respondents (N=60)

Marital status	Frequency	Percentage (%)
Married	32	50.0
Single	22	36.7
Cohabiting	04	6.7
Divorced /separated	04	6.7
Total	**60**	**100**

Half of the respondents, 30(50%) were married while 22(36%) were single.

Table 4: Education level of the respondents (N=60)

Education Level	Frequency	Percentage (%)
No formal education	02	3.3
Primary	24	40.0
Secondary	16	26.7
Tertially	18	30.0
Total	**60**	**100.0**

24(40%) were of primary education, 18(30%) were of tertiary education, while 16(26.7%) were of secondary education.

Table 5: Religion of the respondents (N=60)

Religion	Frequency	Percentage
Catholic	22	36.7
Engelican	26	43.3
Moslem	01	1.7
Reate wital	05	8.3
Others	06	10.0
Total	**60**	**100.0**

26(43.3%) were catholic and 22 (36.7%) were Anglican. These were the predominant religions.

Table 6: Employment status of the respondents (N=60)

Employment status	Frequency	Percentage (%)
Employed	06	10
Un employed	10	16.7
Students	16	26.7
Self-employed	28	46.7
Total	**60**	**100.0**

Slightly less than one half, 28(46.7%) were self employed while 16(26.7%) were students.

Knowledge about circumcision

Asked whether they had ever heard about circumcision, all the respondents 50(100%) mentioned that they had heard about circumcision.

Table 7: Source of knowledge about circumcision (N=60)

Source	Frequency	Percentage (%)
Radio	30	50.0
Health workers	20	33.3
News papers	08	13.3
Others	02	3.4
Total	**60**	**100.0**

Half of the respondents, 30(50%) mentioned radios, while 20(33.3%) mentioned health workers.

Table 8: Belief in circumcision to reduce the risk of other STIs, improvement of penile hygiene and risk of penile cancer (N=60)

Alternative	Response	Frequency	Percentage (%)
Circumcision protective against STIs	Yes	40	66.7
	No	16	26.7
	Not sure	04	06.7
	Total	**60**	**100.0**
Circumcision of protective against HIV	Yes	30	50.0
	No	20	33.3
	Not Sure	**10**	**16.7**
Circumcision reduces risk of Senile cancer	Yes	50	83.3
	No	02	3.3
	Not sure	08	13.3
Total		**60**	**100**

40 (66.7%) mentioned protection against STIs, 30(50%) protection against HIV and 50 (83.3%) reduce risk of cancer.

Table 9: complications of circumcision (N=60)

Alternative	Response	Frequency	Percentage(%)
Belief that there are complications associated with circumcision	Yes	42	70.0
	No	16	26.7
	Not sure	02	03.3
Complications of SMC mentioned by participants more than one response possible.	Pain	32	76.2
	Bleeding	22	52.4
	Others	**14**	**33.3**

Belief of complications was 42 (70%) mentioned complications; pain 32(76.2%) bleeding 22(52.4%)

Results on the attitudes towards circumcision

Table 10: Attitude towards circumcision (N=60)

Attitude	Alternative	Frequency	Percentage (%)
Circumcision being considered good or bad	Good	38	63.3
	Bad	04	6.7
	Not sure	18	30.0
	Total	**60**	**100.0**
Circumcised men have more sexual feelings than uncircumcised men	Agree	24	40.0
	Disagree	08	13.3
	Don't know	28	46.7
	Total	**60**	**100.0**
Women people men have more sexual feelings than un circumcised men	Agree	32	53.3
	Disagree	07	11.7
	Don't know	21	35.0
	Total	**60**	**100.0**
Circumcision causes unbearable pain	Agree	28	46.7
	Not sure	24	40.0
	Don't know	08	13.3
	Total	60	100.0
It is important to be circumcised at any age	Agree	42	70.0
	Disagree	09	15.0
	Not sure	09	15.0
	Total	**60**	**100.0**

38(63.3%) respondents considered circumcision good. 24(40%) agree on circumcised men having more sexual feeling, 32(53.3%) said women have more sexual feeling with circumcised men.

Response on the practice of circumcision

Table 11: Practice of circumcision

Alternative	Response	Frequency	Percentage(%)
Circumcision status	Circumcised	25	41.7
	Not circumcised	35	58.3
	Total	**60**	**100.0**
Reasons advanced why many males are not circumcised more than one response possible.	Fear of pain	18	30.0
	High costs	12	20.0
	No privacy	09	15.0
	Others	06	10.0
	Don't know	12	20.0
Proposal to help scale upon the rate of circumcision among men.	Education advantages	40	66.7
	Moving it free of change	09	
	Making it as private as possible	08	13.3

Circumcised men were 25(41.7%),35(58.3%) not circumcised. 18(30%) fear pain 12920%) high costs..Education 40 (66.7%) respondents to scale up circumcision and 15% making it free

DISCUSSION

Demographic characteristics.

Regarding the age of respondents half, 30(50%) were aged 21-25 years, 24(40%) aged were 30 years and the average age was 27 years. This is a fairly young male population that is sexually active, hence in need of circumcision to benefit from its protective effects against HIV/AIDS [26][27[28][29][30][31].

About the marital status, slightly more than one third, 22(36.7%) were single while half, 30(50%) were married. The unmarried males are at a high risk of HIV and could also benefit from circumcision. Regarding the education of the respondents, more than one third, 24(40%) had formal education with only 18(30%) having tertiary education. This predominantly semi-literate population may not easily comprehend the relevance of circumcision. [32][33[34[35[36][37], revealed that the more educated males are more likely to be circumcised compared to the unmarried ones. Therefore, more effort is needed to enable the residents appreciate more about SMC. By religion affiliation, an overwhelming majority 48(80%) were Christians, while only 1(1.7%) was Moslem. The predominance of Christians could also partly explain the low numbers of circumcised men in the since Christianity doesn't compel believe to circumcise. In [11][30][31][32][38][39][40] the study established that are less likely to be circumcised, which seems to be the case in the study area.

About the employment of the respondents, 28(46.7%) were self-employed, doing nonspecific small-scale businesses, 10(16.7%) were unemployed and 16(26.75) were students. The predominance of cow income earns partly explains their limited capacity for pay especially in private health facilities, where payment is majority.

Knowledge about circumcision.

Knowledge was good as all the respondents, 60(100%) mentioned that they had heard about it mainly from the radios and health workers. Even the UDHS 2016 revealed that all Ugandan adult males were knowledgeable about circumcision. However only 50(50%) believed that circumcision has some protective effects against HIV. This also partly explains the low number of circumcised men in the area among those that did not believe in this fact. Another factor that was hindering men from undergoing circumcision was their belief that is associated with complications, with 42(70%) saying so. The main complications mentioned were pain, 32(70%) and bleeding 22(52.4%). Therefore, some adult men could be shunning the exercise for fear of the above-mentioned complications.

Attitude towards circumcision

The attitude towards circumcision was fair with 38(63.3%) saying it was good against 4(6.7%) who said it was bad. However, a signification number 18(30%) were not sure whether its good or bad. In general, as in table 8 about one third were generally negative or not sure about the benefits of circumcision.

Practice of circumcision.

The majority, 35(58%) of the respondents were not circumcised while only 25(41.7%) were circumcised. The main reason advanced for low numbers of circumcised men in the area were fear of pain and high costs in private hospitals.

Asked how male circumcision can be scaled up in the area, the majority, 40(66.7%) mentioned more education about advantage and making it completely free of charge in all health facilities.

CONCLUSION

Demographics

- Most respondents were young males (mean age of 27) hence were all sexually active.
- Many of the respondents were married but a significant number were single.
- Many of the respondents were of a low education level.
- An overwhelming majority of respondents were Christians by religion.
- Most of them were self-employed in petty business while a significant number had nonfarm of employment at all.

Knowledge about circumcision

- All the respondents had ever heard about circumcision mainly from radios and health workers. However only half of them believed that it has some preventive effective effects against HIV.
- Most respondents also associated SMC with complications, especially pain and bleeding.

Attitude towards circumcision

The attitude towards circumcision was fair as most of them considered it good. However, a significant number was replaced number was negative towards circumcision mainly due to the unreasonable pain and limited knowledge about the advantages with it.

Practice of circumcision

- The practice of circumcision was still low as 35(58.3%) of the respondents were not circumcised against 25(41.7%) who were circumcised.
- Among the reasons advanced for cow uptake of circumcision included fear of pain, high costs and limited privacy in circumcision camps.
- The respondents proposed that in order to scale up circumcision, they should be given more information on the advantages of circumcision, make it free of charge, and improve on the privacy of circumcision camps.

Recommendations

- Health education of the respondents on the advantages of circumcision especially on the fact that it has protective effects against HIV as to faster positive behavior change.
- Government should possibly pay for all circumcision in private health facilities.
- Attitude towards SMC should be improved by regularly talking about in all public places like markets etc.
- The circumcision camps should improve on the privacy of the clients that turn up for circumcision.
- Promoting education of children in the study area so as to enhance a more literate population in the future, that is more likely to embrace circumcision.
- Promote income generally actives to empower male adults to pay for circumcision services whether necessary.

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