

**FACTORS INFLUENCING THE UPTAKE OF SAFE MALE CIRCUMCISION
AMONG YOUTH LIVING IN THE LAKE SIDE VILLAGES OF
SIAYA COUNTY, KENYA**

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NOVEMBER 2016

DECLARATION

I Amos Desmond N'guono declare that this is my own work that has not been submitted in any institution for the award of any degree or diploma.

AMOS DESMOND NG'UONO

Signature.....

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Date.....

APPROVAL

This report titled ‘Factors influencing the uptake of safe male circumcision among youth living in the lake side villages of Siaya County’ has been submitted with the approval of my research supervisor for the award of a Bachelors degree in Nursing at International Health Sciences University.

Ms. LWANIRA CATHERINE

Signature.....

Date.....

DEDICATION

I dedicate this work to my two mothers Doreen Opileh and Caroline Auma who have tirelessly worked to make me through. I can never have a better family.

ACKNOWLEDGEMENT

I would like to honor the almighty God for his unending grace, mercy and power that has seen me this far.

I would like to thank my supervisor Madam Catherine Lwanira who has tirelessly guided me through this research.

Not forgetting the correspondents of this research and the assistants who assisted me in data collection, the local and county government officials who allowed me to do the study.

To the study participants, thank you for allowing being part of this study.

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OPERATIONAL DEFINITIONS

- Safe - Refers to not in danger or likely to be harmed (Cambridge dictionary 2016).
- Male Circumcision - Refers to the surgical removal of the skin that covers the tip of the penis (New Dictionary of Cultural Literacy, 3rd Edition, © 2005).
- Youth - According to Kenya national youth charter of 2013, a youth was defined as any person within the ages of 15 and 35
- Prevalence - Is the spread of an occurrence in a particular place in time.

LIST OF ABBREVIATIONS

SMC	-	Safe male circumcision
HIV	-	Human immunodeficiency virus
VMMC	-	Voluntary medical male circumcision
WHO	-	World Health Organization
USAID	-	United States Agency for International Development
ART	-	Anti retroviral treatment
SADC	-	Southern Africa development community
MC	-	Male circumcision
NGO	-	Non government organization
CVI	-	Content validity index
UDHS	-	Uganda demographic and health survey

ABSTRACT

Background

Safe male circumcision is a medical procedure believed to reduce the risk of female to male HIV transmission. However, its' uptake is still low in some communities due to a several factors. In this study, the prevalence and factors associated with the uptake of safe male circumcision among youth living in fishing villages of Siaya County was done. Results from this study may be useful in advocating for strategies that may improve the uptake of safe male circumcision among the youths.

Methods

This was a cross sectional study on 228 youths. Data on uptake of safe male circumcision and factors associated with its uptake was obtained from the respondents using questionnaire-based interviews. Chi square tests were used to determine the association between the uptake of safe male circumcision and associated factors. P values and their 95 % confidence intervals were calculated. For all statistical tests a P-value of less than 0.05 was considered significant.

Results

The prevalence of uptake of safe male circumcision among the youth living in the lake side villages of Siaya County was 67%.

Various factors were significantly associated with uptake of SMC; these included social demographic factors such as age, religion, marital status, type of housing, main source of income and monthly income. Awareness of SMC, source of information on SMC, knowledge on the benefits, and who influenced one to go for SMC, were significant predictors of SMC. Barriers associated with uptake of SMC and perceptions on the importance of SMC were the sociocultural factors significantly associated with uptake of SMC among the respondents.

Conclusion and recommendations

The prevalence of uptake of safe male circumcision among the youth living in the lake side villages of Siaya County was 67%. This percentage has not changed from the earlier reported prevalence of uptake of safe male circumcision in Nyanza (66%) by 2012, depicting stagnation in usage of the procedure. Therefore, County and national task forces should be setup to conduct robust sensitization campaigns that are focused on educating health workers,

political and traditional leaders, youths and the media about safe male circumcision, its benefits and its relation to HIV prevention. This may promote the uptake of SMC services among the youth and older men. Additionally, circumcision services need to be more robust and tailored to fit the preferences of even the remaining population that is not circumcised. And leave should be issued and due compensation given to encourage the procedure.

CHAPTER ONE

1.0 Introduction

In this study, factors influencing the uptake of safe male circumcision among youth living in the lake side villages of Siaya County were investigated. This chapter includes the background to the study, problem statement, the significance of the study, objectives of the study, research questions and the conceptual framework.

1.1 Background

Circumcision refers to the removal of the sheath or foreskin covering the tip of the penis. This procedure has been done for centuries since biblical times. Safe male circumcision (SMC), also called voluntary medical male circumcision (VMMC) is a medical procedure believed to curb HIV transmission in males. Several studies have shown that male circumcision reduces the risk of female to male HIV transmission by about 60% (CDC, 2011). Besides HIV prevention, it is also known that circumcision reduces risk for other sexually transmitted diseases such as syphilis and the risk of cervical cancer in women who have circumcised partners (THE LANCET, 2007). Besides penile hygiene is improved (WHO, 1998).

Global estimates in 2006 suggest that about 30% of males – representing a total of approximately 665 million men are circumcised. Of these, around two thirds (69%) are Muslim (living 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 United States of America. Many of these are circumcised due to perceived health and sexual benefits, and the desire to conform to social-cultural norms. In the USA, the circumcision rate is approximately 90% in the majority white population of males. About 90% of these circumcisions are carried out neonatally [O'Brien et al., 1995]. In the UK, the 2000 British National Survey of Sexual Attitudes and Lifestyle found that 16% of 16-44 year-olds was circumcised, the rate being 20% in those aged 40-44 and 12% in the 16-19 year age group [Dave et al., 2003]. In Canada it is estimated that around half of the male population is circumcised. In Europe, Spain had 2% of males circumcised (Castellsague et al., 2005).

Down in the Central and South America, the prevalence of circumcision is around 20% and in Sao Paulo, Brazil, about 7% of the population is circumcised, while in Rio de Janeiro, the circumcision rate is about 13% [Périsse et al., 2009]. In some parts of Asia such as Philippines the number males circumcised are as high as 93% (Castellsague et al., 2005). In middle east countries such as Bahrain and Afghanistan, the circumcision rate is above 80% (Castellsague et al., 2005).

In Sub Saharan Africa the overall circumcision rate has been shown to be 62% [Drain et al., 2004], with circumcision rates varying markedly between tribes that do and do not circumcise. Usually, circumcision is done later in life. The rate amongst males over 15 years of age is 8% in Swaziland, 10% in Zimbabwe, 11% in Botswana, 12% in Malawi, 13% in Zambia, 14% in Uganda, 21% in Namibia, 25% in South Africa, and 70% in Tanzania, 85% in Ghana, 90% in Nigeria, 90% in Angola, 90% in the Democratic Republic of Congo, and 92% in Ethiopia (World, 2008b; de Bruyn et al., 2010).

In Kenya the proportion of men who reported being circumcised increased significantly from 85.0% in 2007 to 91.2% in 2012. The proportions of circumcised men increased in all regions, with the highest increases of 18.1 and 9.0 percentage points in the VMMC priority regions of Nyanza and Nairobi, respectively. About half (52.5%) of HIV-uninfected and uncircumcised men had never been married, and 84.6% were not using condoms at all times with their last sexual partner. In Kenya's Nyanza Province, HIV prevalence is 15%—almost three times the national average—and only 66% of males in Nyanza are reported to be circumcised, compared to 91% in the rest of the country (Galbraith et al., 2012). This proportion is still lower than the estimated percentage required for averting HIV infection. USAID, (2009) estimated that 750,000 cases of HIV can be averted if 80% of men are circumcised. More still, data on uptake of safe male circumcision (SMC) in some parts of Kenya's Nyanza Province such as Siaya County is limited. Yet traditionally, this region is shared among two tribes the Luo who do not circumcise their males traditionally and the Kisii who traditionally circumcise their males at puberty. It is thus important to establish the current prevalence of uptake of safe male circumcision in order to determine the factors influencing SMC uptake, such that strategies for improving SMC uptake in the area can be devised.

1.2 Statement of the problem

Kenya has the fourth largest HIV epidemic in the world. In 2012 it was estimated that 1.6 million people and roughly 57,000 people died with the disease and related illness (UNAIDS, 2014). A new initiative was launched to promote attendance of free male circumcision that would be rewarded with cash incentives in 2012, with the aim of reducing HIV transmission in males. However, while VMMC programs are scaled up, it is unlikely that this goal will be reached, mainly due to the low uptake of the free service by men especially of the ages above 25 years (NATIONAL AIDS CONTROL COUNCIL OF KENYA). Of more concern is the high incidence of HIV (22%) in the fishing communities along Lake Victoria. Yet, rampant sex practices in exchange for fish have been shown to be on the rise due to the continuing scarcity of fish these in fishing villages (ISLAND SOCIETY 2016) It is not known why even with free male circumcision services available, the uptake of SMC in the fishing villages is still low. According to Columbia mailman school of public health, only 66% of males in Nyanza were circumcised, compared to 91% in the rest of the country. This proportion is still lower than the estimated percentage required for averting HIV infection. USAID, (2009) estimated that 750,000 cases of HIV can be averted if 80% of men are circumcised. Thus against this back ground, this study was carried out with the aim of establishing the factors influencing the uptake of safe male circumcision among the youth living in the lake side villages of Siaya County, Kenya.

1.3 Justification

There is compelling evidence that male circumcision reduces the risks of heterosexual HIV transmissions by 60 % (WHO, 2002). An understanding of the factors influencing the uptake of safe male circumcision among the youth especially those living in the lake side villages may provide information that may be useful in devising strategies for improving SMC uptake. This is important if the USAID, (2009) estimate of averting 750,000 cases of HIV if 80% of men are circumcised is to be realized.

Furthermore, this work brings new knowledge on the prevalence of circumcision in fishing villages of Siaya County. This would attract the county government to employ more resources towards further knowledge on circumcision and implementation of safe male circumcision projects in the community.

1.4 Study objectives

1.4.1 General objective

To determine the factors influencing the uptake of safe male circumcision among the youth living in the lake side villages of Siaya County, Kenya.

1.4.2 Specific objectives

- 1) To determine the prevalence of uptake of safe male circumcision among the youth living in the lake side villages of Siaya County, Kenya.
- 2) To establish the socio demographic factors associated with the uptake of safe male circumcision among the youth living in the lake side villages of Siaya County, Kenya.
- 3) To determine the individual factors associated with the uptake of safe male circumcision among the youth living in the lake side villages of Siaya County, Kenya.
- 4) To identify the social cultural factors influencing the uptake of male circumcision among the youth living in the lake side villages of Siaya County, Kenya.

1.5 Research questions

- 1) What is the prevalence of uptake of safe male circumcision among the youth living in the lake side villages of Siaya County, Kenya?
- 2) What are the socio demographic factors associated with the uptake of safe male circumcision among the youth living in the lake side villages of Siaya County, Kenya?
- 3) What individual factors are associated with the uptake of safe male circumcision among the youth living in the lake side villages of Siaya County, Kenya?
- 4) What are the social cultural factors influencing the uptake of male circumcision among the youth living in the lake side villages of Siaya County, Kenya?

1.6 Conceptual frame work

The conceptual frame work is given in the figure 1. In this study, the dependent variable was uptake of safe male circumcision. Independent variables included social demographic factors such as age, religion, marital status among others, individual factors, and social cultural factors. The frame work indicates how the independent variables interrelate to uptake of safe male circumcision. Individual factors were assessed in terms of knowledge about SMC,

source of information about SMC, awareness of the benefits of SMC, influencer of uptake of SMC, health facility that offers service and the cost of service. The socio cultural factors were assessed in terms of the barriers of uptake of SMC such as fear of pain, fear of stigma, cultural taboos among others and the cultural importance of circumcision.

Figure 1 showing the conceptual frame work

Independent Variables

Social demographic factors

- Age
- religion
- Marital status
- Level of education
- Occupation
- Income status
- Main source of income

Individual factors

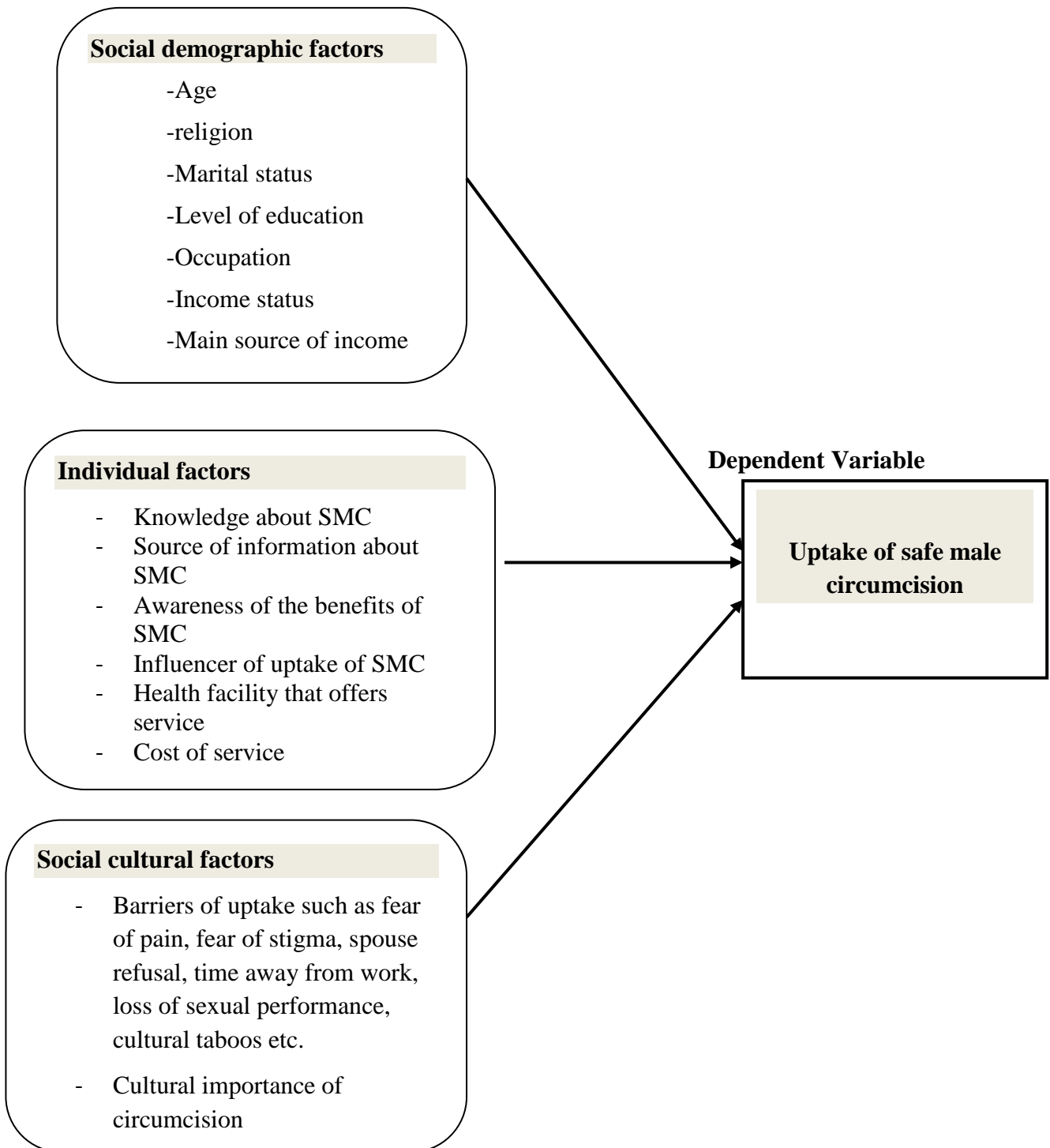
- Knowledge about SMC
- Source of information about SMC
- Awareness of the benefits of SMC
- Influencer of uptake of SMC
- Health facility that offers service
- Cost of service

Social cultural factors

- Barriers of uptake such as fear of pain, fear of stigma, spouse refusal, time away from work, loss of sexual performance, cultural taboos etc.
- Cultural importance of circumcision

Dependent Variable

Uptake of safe male circumcision



CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

This chapter looks into the available literature to the factors influencing the uptake of safe male circumcision in the order of the study objectives. The sources of information included books, internet, journals, newspapers and scholarly materials among others.

2.1 Overview of safe male circumcision

According to the Oxford concise color medical dictionary, circumcision is a noun denoting surgical removal of the foreskin of the penis. According to (WHO) 2014, it is believed that circumcision can prevent heterosexual transmission of HIV by approximately 60% and thus it is a good tool to prevent new infections among areas with heterosexual epidemics. However the same article suggests that circumcision should be supplemented with other means of combating HIV such as antiretroviral therapy (ART) and use of condoms. This is in line with another study done in Rakai Uganda in 2012 were further evidence regarding safe male circumcision suggested by UNAIDS in randomized trials produced similar results (UNAIDS, 2012). Some studies show that men circumcised in childhood/adolescence are at substantially reduced risk of invasive penile cancer, and this effect could be mediated partly through an effect on phimosis. Expansion of circumcision services in sub-Saharan Africa as an HIV prevention strategy may additionally reduce penile cancer risk (Larke et al., 2011).

Circumcision has also been shown to improve penile hygiene. According to the independent newspaper in 9th October 2015, a survey was in London of 150 uncircumcised and 75 circumcised men. Researchers found that 4% of circumcised compared with 26% of uncircumcised men had inferior genital hygiene behavior, i.e., did not always wash the entire penis. This was because the uncircumcised men weren't washing under their foreskins. Besides this, circumcision is a treatment for phimosis. Other benefits of circumcision would be reduction of various cancers, among men penile cancer, among women cervical cancer. With all these benefits of circumcision safe performance the procedure can still be hindered by certain factors like culture and misconceptions (Gray et al., 2011).

Global estimates in 2006 suggest that about 30% of males – representing a total of approximately 665 million men are circumcised. Of these, around two thirds (69%) are Muslim (living 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 United States of America. In the USA, the circumcision rate is approximately 90% in the majority white population of males, about 90% of these circumcisions are carried out neonatally [O'Brien et al., 1995]. In the UK, the 2000 British National Survey of Sexual Attitudes and Lifestyle found that 16% of 16-44 year-olds were circumcised [Dave et al., 2003]. In Canada, it is estimated that around half of the male population is circumcised. In Europe, Spain had 2% of males circumcised (Castellsague et al., 2005). Down in the Central and South America, the prevalence of circumcision is around 20% [Périsse et al., 2009]. In some parts of Asia such as Philippines the number males circumcised are as high as 93% (Castellsague et al., 2005). In middleeast countries such as Bahrain and Afghanistan, the circumcision rate is above 80% (Castellsague et al., 2005).

In Sub Saharan Africa, the overall circumcision rate has been shown to be 62% [Drain et al., 2004], with circumcision rates varying markedly between tribes that do and do not circumcise. The rate amongst males over 15 years of age is 8% in Swaziland, 10% in Zimbabwe, 11% in Botswana, 12% in Malawi, 13% in Zambia, 14% in Uganda, 21% in Namibia, 25% in South Africa, and 70% in Tanzania, 85% in Ghana, 90% in Nigeria, 90% in Angola, 90% in the Democratic Republic of Congo, and 92% in Ethiopia (World, 2008b; de Bruyn et al., 2010). In Kenya the proportion of men who reported being circumcised increased significantly from 85.0% in 2007 to 91.2% in 2012. In Kenya's Nyanza Province 66% of males in Nyanza are reported to be circumcised, compared to 91% in the rest of the country (Galbraith...etal 2012).

2.2 Social demographic factors influencing uptake of safe male circumcision

According to Herman-rollof et al., (2011) participants reported that too much time away from work, especially if the man is the sole provider for the family, is the most significant barrier to seeking the service. This barrier was especially noted among older men, and men working in the informal sector, including bicycle transporters, security guards, fishermen and others. Participants believed that men might be away from work for a minimum of one week up to a maximum of 12 weeks after circumcision.

Obure et al., (2009) in study of non circumcising communities of western Kenya says that most participants observed that apart from the actual cost of the procedure, there are a myriad of additional associated costs that could obstruct circumcision-seeking behavior in the community. These included expenses for wound dressing, medications, and transport costs to visit the health facility. Moreover, circumcision was least among household priorities and its

effects long-term. In addition, there was fear that circumcision may temporarily immobilize economically productive males. Many discussants perceived that this time taken to heal would lead to loss of much needed daily household income.

Scolnic et al., (2014) in Lesotho found out the same about costs particularly indirect costs for transport, was another barrier to voluntary medical male circumcision (VMMC). Notably, participants felt burdened by the cumulative transport costs associated with VMMC because they were required to make multiple visits to the clinic to register for the service, get circumcised, and return for several follow-up visits.

Religion has been reported as another factor influencing SMC uptake. Rob (2007) says that male circumcision is taken as a norm in some communities. Many cultures, however do not embrace this practice, for example the Hindu and Sikh. Ogwal (2008) also found out in a study done in Nsambya, Uganda that religion was a significant factor in circumcision prevalence. In this case Muslims tend to circumcise more of their males. Weiss and Polonski (2007) also found out in a study of global determinants of prevalence that religion is a big determinant of circumcision. They discovered that Muslims were the largest group that circumcised, taking 69% of the circumcised, followed by the non Muslim-non Jews at 13%, then followed by Jews at 0.8%. Certain communities are strongly opposed to circumcision. Therefore, it is unlikely that this intervention will be able to benefit all parts of the study. Furthermore, some men will have personal reasons to turn down male circumcision, even if their culture allows it.

Obure et al (2009) states in clear terms that non-circumcision among the Luo was mentioned by most participants as a significant cultural characteristic distinguished them from other communities, and some expressed fear that introducing circumcision could cause loss of this cultural identity.

Education was identified by some respondents as playing a role in men's attitude towards male circumcision. The general impression was that more educated men are more likely to be aware of the benefits of male circumcision for reduced risk of HIV and other infections and as a result are more likely to come for safe male circumcision. The educated ones take it positively and mostly go to hospitals for circumcision. Twelve respondents who represent 60% of the total number of respondents indicated that they have 17 12 Educational Level of Circumcised men Primary Secondary Tertiary/ University 43 acquired some higher national

diplomas with 2 of the respondents (20%) having gone through the University level. Seven of the circumcised men (35%) indicated that they have gone through secondary education in Zimbabwe, with 2 of them having gone through to all the 6 years of secondary education. One respondent (5%) indicated that he has been to primary school and could not continue further. Higher educational levels influence the prevalence of male circumcision. These findings concur with the Demographic and Health Surveys (2006) that in sub-Saharan African countries like Tanzania, and Botswana with higher rates of circumcision, also have men with higher levels of education having at least secondary education, of higher socioeconomic status and living in urban areas(chigondo Etitya 2014)

Most of Korean males were circumcised after the neonatal period; only 11.2% were circumcised during the neonatal period in this survey. 72.3% of parents were not recommended the neonatal circumcision on their sons from hospitals during the neonatal period. When asked the reasons to 1,400 parents who were against the neonatal circumcision, the most frequent responses were 'babies feel pain', and 'earlier circumcised, more unshaped', accounted for 35.8%, and 25.3%, respectively (Dunsmuir et al.,1999)

2.3 Individual factors influencing uptake of safe male circumcision

Individual factors such as knowledge about safe male circumcision, source of information regarding safe male circumcision, influencer of uptake of safe male circumcision, health facility offering service and cost of service among others have also been reported to influence the uptake of safe male circumcision.

Muhangi (2010) in their study carried out in kayunga and palisa in Uganda found out that exposure to information about the benefits of male circumcision was reported to have led some young men to be circumcised. In fact, exposure to information from trusted sources such as radio health programs was found to have been a tipping point in young men's decisions to get circumcised. On the contrary he also discovered that for some people, lack of awareness about the benefits of male circumcision was a key constraint to the adoption of SMC. Indeed, it is difficult for people to adopt male circumcision if they do not know much about it.

A study done in Kampala and Kayunga, Uganda by USAID found out peer influence was found to be a key factor that influences decisions to seek medical male circumcision. Where

one's peers were already circumcised, or where they made a group decision to go for circumcision, one was likely to comply with peer influence and go for circumcision. Some young men got circumcised in order to be accepted, respected and to enjoy the company and support of their peers. To a considerable extent, peers also influence the choice of circumcision method. The same study also found out that the importance of positive societal attitudes is that they offer social support and lend social acceptability to certain practices. As such most people are likely to adopt those behaviors for which there is such social support. A number of participants thought circumcised men were viewed favorably in their respective communities, which was thought to encourage more people to adopt circumcision (USAID 2012)

Echwalu (2012) states in clear terms that infrastructure and staffing affects the quality and uptake of VMMC services. Most men prefer to be circumcised in a hospital setting. Good staffing may be required for the scale up of VMMC. This needs to be a prerequisite for VMMC. However, most programs in Southern Africa Development Community (SADC) countries lack adequate staffing. Health facilities report that they would be able to increase the number of VMMC performed if they had additional staff, equipment, and instruments, such as surgical tables, protective gear, operating instruments, disposable equipment, sterilizers, reliable electrical power, adequate water supply, medicines, availability of the procedure room, and more staff trained on how to perform the surgery. Advocacy at all levels, from global to local, will be required to improve and sustain delivery of this effective and cost-saving prevention intervention.

Obure et al., (2009) argues that many participants mentioned accessibility to the nearest health facility as a barrier to seeking SMC. The participants expressed a perception that some people preferring circumcision may not seek it because of transportation expenses to the nearest hospital.

In a study done by USAID in Iringa Tanzania 2013, travel distance to get to the clinics that provided circumcision services were mentioned as both a facilitator and barrier to circumcision. One client, for example, said that having to travel a long distance for the service was actually a good thing. It meant that he was completely anonymous at the service delivery site—no one in his local community could identify him and shame him. Meaning the

longer the distance the more it was a barrier get circumcised. On the other hand, for traditionally circumcising areas, the reverse was true.

2.4 Social cultural factors associated with uptake of safe male circumcision

Culture, fear of pain, fear of stigma, spousal refusal, time spent away from work, fear of loss of sexual function and the cultural taboos are among the socio cultural barriers associated with uptake of safe male circumcision. A study done by USAID in Iringa Tanzania in 2013 found that many participants mentioned circumcision never being a part of traditional practice in the Iringa area (outside of the Muslim minority). They emphasized, however, that even though it had not been a part of their cultural practice, most youth were not opposed to circumcision on cultural grounds. According to them, one of the reasons the recent circumcision campaigns have been so successful is because there is no specific culture forbidding circumcision; it had never been a part of life. However on the other hand some men in the study felt that older men, especially those from remote villages, may not be as comfortable with circumcision. A man who was circumcised said, “In the villages, as I told you, they have the belief, ‘Why should I get circumcised? My father died without being circumcised, and my grandfather, too.’” This view of the importance of cultural continuity was seen as being especially strong in the older generation—those who have already born children. A health care worker spoke about the older generation believing “[...] that you cannot bury a human being two times. They bury the foreskin and then when you die they bury you as well.” Our participants expressed the idea that youth were open to change and to new ideas, but that once people had born children, the window was closed and they were better off holding on to the old ways.

Muhangi, (2012) in a study carried out in Rakai Uganda showed that, apart from its positive influence on young men’s decision to seek male circumcision, culture can also negatively affect such decisions in certain ways especially as regards medical male circumcision. The role of culture in negatively influencing decisions to seek medical circumcision and this arises from the fact that circumcision is not traditionally practiced in majority cultures in Uganda. In this study, some young men and their parents from non-traditionally circumcising ethnic communities expressed strong feelings against male circumcision because this practice is not part of their cultures. In such cases, male circumcision was perceived as alien, and as a reserve of particular religion and ethnic groups and cultures. They argued that they could not adopt a practice that their forefathers never had.

Fear of stigma has also been shown to strongly influence SMC uptake. Goshme (2012), among the 84 respondents, 76.2% (N=64) reported that stigma and discrimination would not influence them to undergo male circumcision while only 9.5% (N=8) had a fear of stigma and discrimination, and they claimed that this fear would prevent them from undergoing male circumcision.

In some studies, the fear about sexual performance has been a serious concern regarding the uptake of SMC. USAID in Iringa Tanzania 2013 discovered another fear mentioned several times was the fear of impotence or reduced sexual performance as a result of circumcision. Some reported hearing rumors that a circumcised man could not satisfy his wife. One participant heard people saying that there was a large chance that the wound would not heal properly. Another NGO worker heard rumors that circumcision could lead to marital dissolution. He said, “They are told that it reduces a man’s ability to satisfy his wife, so one thinks like he cannot afford to lose his wife because of adult circumcision. But all that is just because he is in the dark—there are others who have accepted it well. I think those who lie to their friends about circumcision should be educated.” However, most participants were dismissive of these rumors. They felt that further educational efforts together with personal testimonials from men who had been circumcised would serve to easily dispel these fears of reduced sexual performance.

According to Herma-rollof et al., (2011), almost all participants knew that an abstinence period from sexual activities for some duration was recommended after male circumcision and they discussed this as a barrier for both men and their female sex partners. Participants believed that men, especially young men, would be concerned that their female sex partners might seek other lovers while they are recovering. Older men reported that sleeping in the same bed with a wife would make it difficult to observe the abstinence period. Various duration of the abstinence period were discussed (range: 1 week – 8 weeks); some participants who knew the recommended duration of the abstinence period reported that six weeks was too long to abstain from sexual intercourse.

To some, fear of pain is a major hindrance to uptake of SMC. Liham et al., (2013) in a study done in rural Kisumu says that fear of pain during and after the procedure was the concern study participants mentioned most often. Men expressed concern about pain during surgery, but also feared pain during recovery. Circumcised men said the experience was not as painful

as they had expected. All of them reported managing their pain well during recovery by following instructions from their VMMC providers.

Scolnic et al., (2014) in Kwazulu Natal orange farm South Africa explains that some men feared intense pain because they saw circumcision as an invasive procedure. Men's fear of pain was not limited to cutting off the foreskin—pain was associated with the entire process of circumcision: waiting for the procedure and observing men who have just been circumcised, pain from local anesthetic injections, pain from having stitches removed, and pain through the healing period, particularly when one has unintended erections. Fear of erections as a cause of pain in the weeks following circumcision and some participants even requested a medication to prevent erections. Nearly 60% of the survey participants reasoned that it is the fear of pain that has prevented other men from seeking VMMC. Many participants believed that time off from school or work is needed to recover from the pain of circumcision, and a perceived lack of time (~20% lack time off from school and ~17% lacked time off work, has caused men to delay seeking VMMC.

CHAPTER THREE: METHODOLOGY

3.0 Introduction

This chapter gives a description of the methodology of study and how the study was carried out. It includes the study design, study area, sources of data, study population, sample size, sampling procedures, study variables, data collection tools, quality control, data presentation and analysis, plan for dissemination, ethical issues and limitations to the study.

3.1 Study design

This was a cross sectional study. The study was carried out during the months of June and July, 2016. With a cross sectional study approach, data is collected at one point in time. This was found suitable for determination of the prevalence and factors that may be associated with the uptake of safe male circumcision among youth living in the lake side villages of Siaya County, Kenya.

3.2 Study area

Siaya County is located in Lake Victoria basin in the former province of Nyanza. It is bordered by Busia county to the north, Vihiga county to the north east and Kisumu to the south east. Siaya County is constituted of 29 wards and among these only seven have fishing villages namely; west Yimbo, Yimbo east, west Sakwa, central Sakwa, south Sakwa, west Uyoma and south Uyoma. The population of the study area is about 155,329 people of which 75,329 are male. The region is shared among two tribes the Luo who do not circumcise their males traditionally and the Kisii who traditionally circumcise their males at puberty. However, most residents are Luo speakers who are farmers and fishermen or women. The major economic activities are fishing, farming, transportation and trade. The climate is hot and humid with two rainy seasons a year.

3.3 Study population

The target population was males living in Siaya County, Kenya. The study population constituted any male living in Siaya County between the ages of 15 and 35 years. This age group was chosen because it is the commonest age for an individual to go for circumcision and most community circumcision programs target this age group.

3.4 Eligibility criteria

3.4.1 Inclusion criteria

The study included males aged between 15 and 35 years and resident of any fishing village in Siaya County.

3.4.2 Exclusion criteria

Males who have lived in the area for less than a year, unwilling to participate, the deaf or dumb, mentally ill or the very ill were excluded from the study.

3.5 Sample size calculation

The sample size was calculated using Kish sample size formula below (Kish and Leslie, 1965), assuming an estimated percentage of the circumcised male youth nationwide which is 84% (UNAIDS, 2007).

$$N = \frac{Z^2 P (1-P)}{d^2}$$

Where N is the sample size,

Z is the confidence level of 95% (1.96).

P is the estimated percentage of the circumcised male youth nationwide which is 84% (UNAIDS, 2007).

D is the margin of error at 5% (standard of +/- 0.05)

$$N = \frac{1.96^2 \times 0.84(1-0.84)}{0.05^2}$$

$$N = 207$$

10% was included in calculated sample size to cater for non-response or incomplete questionnaires.

$$10\% = 10/100 \times 207 = 20.7$$

Therefore, a minimum of 228 youths was examined.

3.6 Sampling technique/procedure

Siaya County has seven wards with fishing villages. Using cluster sampling, seven groups or clusters of villages were created; one cluster of villages per ward. Then using simple random sampling one village/ ward was selected from each cluster. Since the sample population was

228; a minimum of 33 eligible respondents from each of the seven villages selected was randomly selected to participate in the study.

3.7 Sources of data

This study employed two types of data sources both primary and secondary.

Primary data

This was obtained directly from the respondents through questionnaires. It is raw data that was used for analysis of the factors influencing the uptake of safe male circumcision among youths living in the lake side villages of Siaya County.

Secondary data

Data from previous publications and scholarly articles on factors the uptake of safe male circumcision among youths was used in literature review and discussion of the study findings. This was utilized in identification of areas of agreement and disagreements among the different studies and thus identifies gaps that could be addressed in this research.

3.8 Study variables

Dependent variable

The dependent variable was uptake of safe male circumcision among youths living in Siaya County, Kenya.

Independent variables

Independent variables included the following;

- Social demographic factors such as age, marital status, level of education occupation and income status.
- Individual factors (knowledge about SMC, source of information about SMC, awareness of the benefits of SMC, influencer of uptake of SMC, health facility that offers service and the cost of service)
- Social cultural factors including various barriers such as fear of pain, fear of stigma, spousal refusal, sexual performance and the time away from work and the cultural taboos

3.9 Data collection methods and tools

The study involved collection of both quantitative and qualitative data using questionnaires. Interviews were used because they allow for the researcher to establish rapport with participants and therefore gain their cooperation, capture verbal and non-verbal responses such as body language, keep the respondents focused and also allow the researcher to clarify ambiguous answers and where appropriate, seek follow-up information. A standardized questionnaire containing both close ended (structured) and open ended (semi-structured) questions on uptake of safe male circumcision (refer to appendix II) was used. This was first pre-tested in another similar setting so as to check for accuracy and consistency of collected data before commencement of study. Using both close and open ended questions, new issues that would not otherwise have been captured using structured questions were collected in a semi-structured interview. The questionnaires were written in English and translated to a local language (Dholuo) for respondents to understand and for the researcher to obtain appropriate responses.

3.10 Data Collection Procedure

Questionnaires were administered to the respondents with the help of research assistants who had been trained by the principal investigator before beginning of study. During administration of the questionnaires, research assistants always verified consistence and completeness of information obtained from the study participants so as to ensure reliability of the collected information.

3.11 Data analysis and presentation

Data was cleaned, coded and entered into Microsoft Office Excel. Descriptive statistics and bi-variate analysis were carried out using the Statistical package for social sciences (SPSS) version 16.0. Descriptive (univariate) data were presented as frequencies and percentages, and illustrated using frequency tables, pie charts and bar graphs. At bi-variate level, Chi square tests were used to determine the association between the dependent and independent variables. P values and their 95 % confidence intervals were calculated. For all statistical tests a P-value of less than 0.05 was considered significant.

Since the study was establishing the factors influencing uptake of safe male circumcision, analysis was kept at the bivariate level. Multivariate level analysis was not used in this study.

3.12 Quality control for field data

Field data including demographics, individual and social cultural information were collected through questionnaire based interviews. Before commencement of the study, standardized questionnaires involving both close and open ended questions were developed and pretested in a similar population living in neighboring villages from the study site, so as to ensure validity of designed questions. Through this pilot study, redundant questions that were not adding any value to the study were removed.

The validity and reliability of the questionnaire was tested using a content validity index (CVI) given by the following formula;

$$CVI = \frac{\text{No. of questions declared valid}}{\text{Total No. of questions in the questionnaire}}$$

Here on, a minimum of 0.75 of CVI was used to confirm validity (Lawshe, 1975)

In order to ensure reliability of the instrument, the test-retest method was used. Here the questionnaire was given to 15 people and after one week, the same questionnaire was re-administered to the same people and the Cronbach Alpha was calculated.

In addition, questionnaires were translated into the local language (Dholuo) that can be understood by majority of the study participants. Research assistants who were trained in different aspects of the study administered questionnaires to the study participants so as to minimize bias in the collected data.

During administration of the questionnaires, research assistants would check for consistency and completeness of information obtained from the study participants so as to ensure reliability of the collected information. Before closure, all questionnaires were double checked for completeness and approved for storage by the principal investigator. Questionnaires were stored in safety lockers under lock and key only be accessible by the principal investigator.

3.13 Ethical issues

All study protocols have been presented for review and approval by institutional review board of International Health Sciences University School of Nursing sciences and the local county administration of Siaya County (Appendix III). Written informed consent was sought from all study participants before enrolment into study. For all collected data, confidentiality

was maintained using participant identifiers. Data shall be safely stored in a safety box under lock and key only accessible to the study investigators.

3.14 Limitations of the study

Data on uptake of safe male circumcision were collected by self report. Self reported status of one's circumcision may be unreliable since the researcher cannot carry out any physical examination to confirm respondent's circumcision status.

The population of the fishing villages of Siaya County is small and thus the research may not be generalized for the whole province of Nyanza or the whole country.

3.15 Plan for dissemination

Results from the study were presented into a dissertation that will be submitted to International Health Sciences University and the Ministry of Health at Siaya County headquarters. A manuscript will be written for submission to a medical journal and presentation to various conferences.

CHAPTER FOUR: RESULTS

4.0 Introduction

This chapter presents findings from the study according to the study objectives. In this study, the prevalence and factors associated with uptake of safe male circumcision among the youth living in the lake side villages of Siaya County, Kenya was determined.

4.1 Socio demographic characteristics of the respondents

In total, 228 participants were enrolled into the study, of these 100% of the participants fully completed the questionnaires making 100% response rate. Majority of the respondents (40.8%) were aged between 21 to 25 years followed by those aged either between 26 and 30 (21.9%) or 15 to 20 years (21.9%). With regards to ward of residence, most respondents were from North Sakwa (24.1%) followed by west Uyoma (17.5%); 16.7% were from East Uyoma, 15.4% from East Yimbo while 14.9% were from Central Sakwa. A greater number of the respondents (62.3%) were Christians followed by Muslims (26.3%) and only 11.4% of them were traditional believers.

More than a third of the respondents were single (43%), a quarter of the respondents were married (25.4%), while 18.4% and 13.2% were divorced or widowed respectively. With respect to level of education, majority of the respondents had either attained tertiary or secondary education level (39.9% and 39% respectively) while 21.1% of the respondents had attained primary education level. Most respondents were peasants (73.2%), doing business as the main source of income (46.1%) and earned a monthly income of less than 5,000 Kenya shillings (34.6%). Details of the socio demographic characteristics of the study participants are given in the table 1 below.

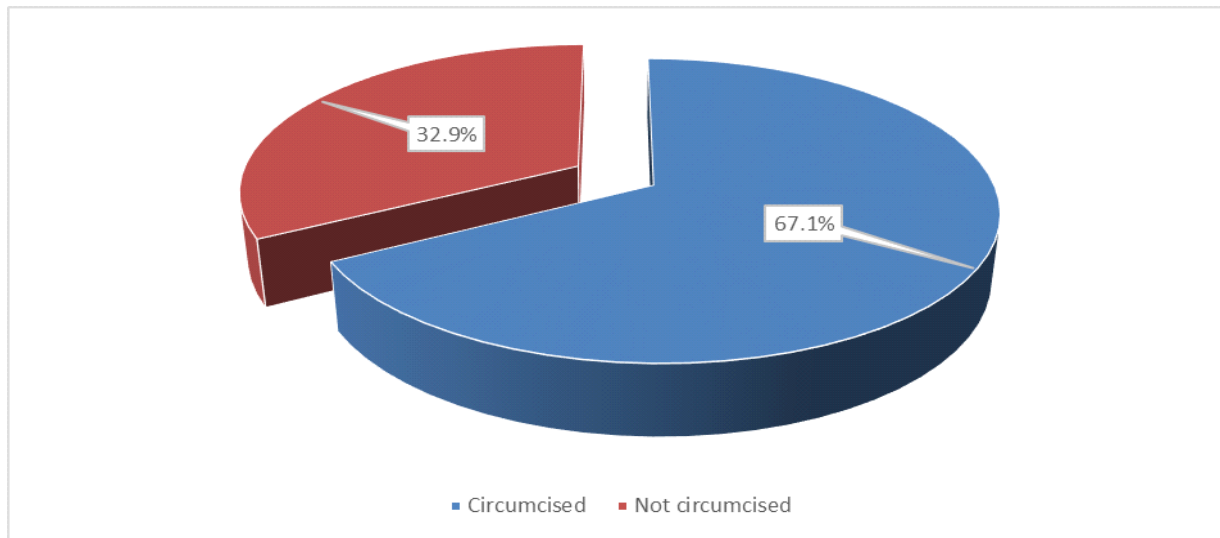
Table 1: Socio demographic characteristics of the respondents (n=228)

Variable	Categories	Frequency	percentage
Age	15-20	50	21.9
	21-25	93	40.8
	26-30	50	21.9
	31-35	35	15.4
Wards	East Yimbo	35	15.4
	West Yimbo	26	11.4
	Central Sakwa	34	14.9
	North Sakwa	55	24.1
	East Uyoma	38	16.7
	West Uyoma	40	17.5
Religion	Christian	142	62.3
	Traditionalist	26	11.4
	Muslim	60	26.3
Marital status	Single	98	43.0
	Married	58	25.4
	Divorced	42	18.4
	Widowed	30	13.2
Level of education	primary	48	21.1
	secondary	89	39.0
	tertiary	91	39.9
Employment status	peasant	167	73.2
	self employed	61	26.8
Main source of income	Job	26	11.4
	Relatives	97	42.5
	Business	105	46.1
Monthly income	Below5,000	79	34.6
	Up to10,000	71	31.1
	Up to25,000	52	22.8
	Above50,000	26	11.4

4.2. Prevalence of uptake of safe male circumcision

Of the 228 participants, 153 (67.1%) were circumcised while only 75 (32.9%) were not circumcised as shown in the Figure 2.

Figure 2: showing the prevalence of Safe male circumcision (n=228)



4.3 Socio-demographic factors and their association with uptake of SMC

In order to determine the relationship between socio demographic factors and uptake of safe male circumcision, a bivariate analysis of socio-demographic factors and uptake of SMC was carried out. Chi square values and corresponding P values were calculated. As shown in the table 2, age (P=0.009), religion (P=0.000), marital status (P= 0.000), type of housing (P=0.033), main source of income (P=0.005) and monthly income (P=0.000) were significantly associated with uptake of SMC among the youth.

There was no relationship between ward, level of education, employment status and uptake of safe male circumcision. Details of the bivariate analysis of socio-demographic factors and uptake of SMC are given in the table 2.

Table 2.: Bivariate analysis of socio-demographic factors and uptake of SMC

Variable	Categories	Circumcision status		X ²	df	p-value
		Circumcised (N=153)	Uncircumcised (N=75)			
Age	15-20	28(56)	22(44)	11.501	3	0.009*
	21-25	57(61.3)	36(38.7)			
	26-30	42(84)	8(16)			
	31-35	26(74.3)	9(25.7)			
Wards	East Yimbo	26(74.3)	9(25.7)	6.383	5	0.271
	West Yimbo	13(50)	13(50)			
	Central Sakwa	21(61.8)	13(38.2)			
	North Sakwa	36(65.5)	19(34.5)			
	East Uyoma	29(76.3)	9(23.7)			
	West Uyoma	28(70)	12(30)			
Religion	Christian	80(56.3)	62(43.7)	23.630	2	0.000*
	Traditionalist	26(100)	0			
	Muslim	47(78.3)	13(21.7)			
Marital status	Single	53(54.1)	45(45.9)	57.175	3	0.000*
	Married	58(100)	0			
	Divorced	33(78.6)	9(21.4)			
	Widowed	153(67.1)	21(70)			
Level of education	Primary	35(72.9)	13(27.1)	4.151	2	0.126
	Secondary	64(71.9)	25(28.1)			
	Tertiary	54(59.3)	37(40.74)			
Employment status	Peasant	109(65.3)	58(34.7)	0.953	1	0.329
	Self employed	44(72.1)	17(27.9)			
Type of housing	Temporary	18(50)	18(50)	8.735	3	0.033*
	Semi-permanent	58(77.3)	17(22.7)			
	Permanent	56(64.3)	31(35.6)			
Main source of income	Job	13(50)	13(50)	10.804	2	0.005*
	Relatives	76(78.4)	21(21.6)			
	Business	64(61)	41(39)			
Monthly income	Below5000	60(75.9)	19(24.1)	25.674	3	0.000*
	Up to10,000	32(45.1)	39(54.9)			
	Up to25000	44(84.6)	8(15.4)			
	Above500000	17(65.4)	9(34.6)			

Number in bracket indicates the percentage

* indicates significant p value

4.4 Individual factors associated with the uptake of safe male circumcision

The relationship between individual factors and uptake of safe male circumcision among the youth was also examined. Among the individual factors studied was knowledge about safe

male circumcision, source of information about SMC, awareness of benefits of safe male circumcision, person who influences decision of uptake of SMC and the cost of the service among others as shown in the Table 3.

Table 3: Individual characteristics of the respondents (N=228)

Variable	Categories	Frequency	Percentage
Ever heard of SMC	Yes	171	75.0
	No	57	25.0
Source of information on SMC	School	63	27.6
	Church	63	27.6
	Friend	89	39.0
	Media	9	3.9
	NGOs	4	1.8
Aware of benefits of SMC	Yes	129	56.6
	No	99	43.4
Health facility that offer SMC	Available	155	68.0
	Not available	73	32.0
Influencer of SMC	Parent	66	28.9
	Spouse	87	38.2
	Friend	47	20.6
	Siblings	28	12.3
Cost of SMC	Free	130	57.0
	Paid for	98	43.0

As shown in the table 3 above, most respondents (75%) had ever had of SMC while a quarter of the respondents reported that they had never had of SMC (25%). With regards to source of information on SMC, majority of the respondents reported that they got information on SMC from friends (39%) followed by School (27.6%) or church (27.6%). Other sources of information included media (3.9%) and NGOs (1.8%). Most respondents were aware of benefits of SMC (56.6%), while only 99 (43.4%) were not aware of SMC. A greater number (68%) reported that there are health facilities which offer SMC services and on a free of charge basis (57%). Only 32% reported that they were not aware of health facilities offering SMC services and that 43% received SMC services at a charge. Spouses were the main influence for one to seek SMC (38.2%) followed by parents, friend and siblings who had undergone SMC.

Table 4.: Bivariate analysis of individual related factors and uptake of SMC

Variable	Categories	Uptake of circumcision		X ²	Df	p-value
		Circumcised (N=153)	Un circumcised (N=75)			
Ever heard of SMC	Yes	122(71.3)	48(28.7)	5.570	1	0.018*
	No	31(54.4)	27(45.6)			
Source of information on SMC	School	36(60.3)	25(39.7)	14.190	4	0.007*
	Church	35(55.6)	28(44.4)			
	Friend	67(75.3)	22(24.7)			
	Media	9(100)	0			
	NGOs	4(100)	0			
Aware of benefits SMC	Yes	76(58.9)	53(41.1)	9.029	1	0.003*
	No	77(77.8)	22(22.2)			
Health facility that offer SMC	Available	110(71)	45(29)	3.272	1	0.070
	Not available	43(58.9)	30(41.1)			
Influencer of SMC	Parent	49(74.2)	17(25.8)	26.603	3	0.000*
	Spouse	43(49.4)	44(50.6)			
	Friend	43(91.5)	4(50.6)			
	Siblings	18(64.3)	10(35.7)			
Cost of SMC	Free	90(69.2)	40(30.8)	0.619	1	0.431
	Paid for	63(64.3)	35(35.7)			

Number in bracket indicates the percentage

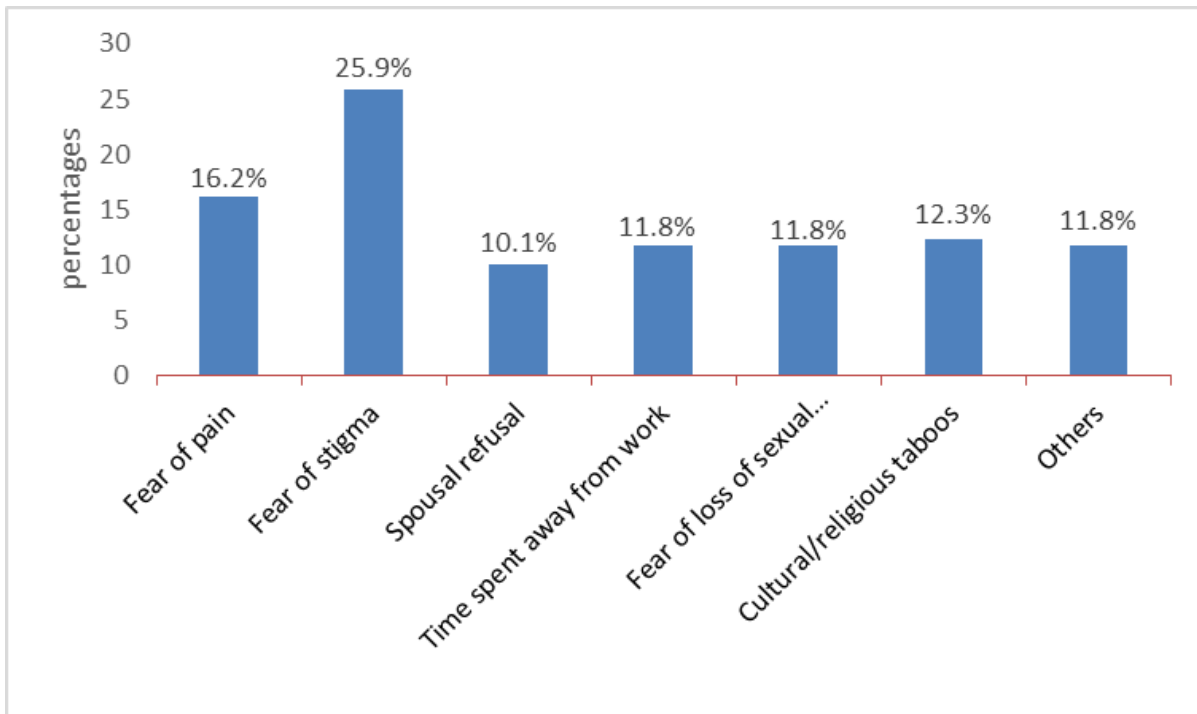
* indicates significant p value

Bivariate analysis showed that awareness of SMC (P =0.018), source of information on SMC (P =0.007), knowledge of the benefits of SMC (P =0.003), and who influenced one to go for SMC (P-value=0.000), were significant predictors of SMC as shown in table 4 above. Health facility that offers SMC and the cost of SMC did not influence safe male circumcision.

4.5 Social cultural factors influencing the uptake of safe male circumcision

Among the socio cultural factors investigated were barriers of uptake of SMC and the cultural importance of circumcision. As shown in the figure 3, most respondents (25.9%) reported that fear of stigma associated with circumcision was the main barrier to uptake of SMC, followed by fear of pain (16.2%), religious taboos on SMC (12.3%), spousal refusal (10.1%), fear of loss of sexual function (11.8%) and other causes (11.8%).

Figure 3: showing barriers to uptake of SMC



Regarding the cultural importance of circumcision, majority of the respondents (81%) reported that SMC was very important cultural aspect while 19% of them reported that it was not important as shown in the figure 4.

Figure 4: showing the cultural importance of circumcision

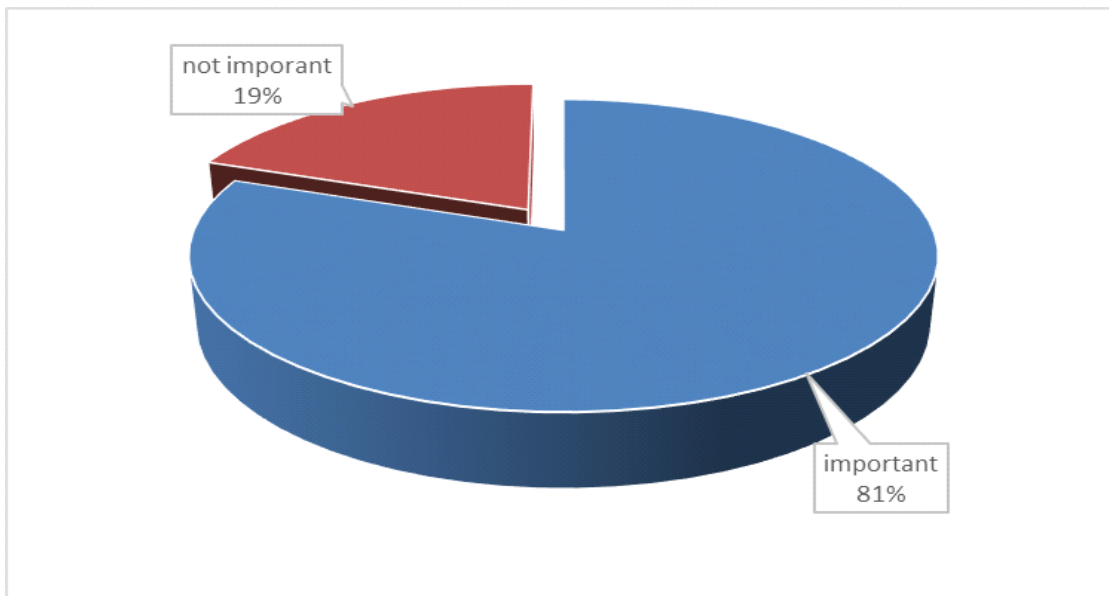


Table 5.: Bivariate analysis of social cultural factors and uptake of SMC

Variable	Categories	Uptake of circumcision		X^2	df	P-value
		Circumcised (N=153)	Not circumcised (N=75)			
Barriers to uptake of SMC	Fear of pain	15(40.5)	22(59.5)	64.952	6	0.000*
	Fear of stigma	43(72.9)	16(27.1)			
	Spousal refusal	4(17.4)	19(82.6)			
	Time spent away from work	27(100)	0			
	Fear of loss of sexual performance	18(66.7)	9(33.3)			
	Cultural/religious taboos	19(67.9)	9(32.1)			
	Others	27(100)	0			
Perception on importance of SMC	Important	122(75.8)	39(24.2)	18.662	1	0.000*
	Not important	31(46.3)	36(53.7)			

Number in bracket indicates the percentage

Bivariate analysis showed that both barriers of uptake of SMC (P=0.000) and perceptions of the importance of SMC (P=0.000) were significantly associated with uptake of SMC among the respondents.

CHAPTER FIVE: DISCUSSION OF RESULTS

5.0 Introduction

This chapter gives a comprehensive assessment of the study results according to the study objectives, how the current findings relate to other scholar's findings and impact of the current results on policy evaluation about safe male circumcision.

5.1 Prevalence of uptake of safe male circumcision

In this study, the prevalence of uptake of SMC among the youth living in the lake side villages of Siaya County was 67.1% while 32.9% reported not being circumcised. By 2012, 66% of males in Nyanza were reported to be circumcised, compared to 91% in the rest of the country. These figures represented an overall increase in the uptake of safe male circumcision in all Kenya between 2007 and 2012, with the highest increases of 18.1 and 9.0 percentage points reported in the VMMC priority regions of Nyanza and Nairobi, respectively (Galbraith et al., 2012). Thus having only 67% of the youths circumcised in our study depicts stagnation in the uptake of safe male circumcision in the fishing villages of Siaya County. This outcome may be unpleasant, since this proportion is still lower than the estimated percentage (80%) required for averting approximately 750,000 cases of HIV infection (USAID, 2009). This finding highlights the need for re-evaluation of the current strategies used to promote voluntary medical male circumcision in Siaya County so as to encourage more youth to take up SMC. Notably, uptake of circumcision reported in this study is higher than reported elsewhere such as in rural Zimbabwe where uptake of male circumcision was reported at 20% (Mavhu et al., 2011) Also compared to neighboring countries, the uptake of SMC in this study is higher than that reported in Uganda. UDHS, 2011 showed that the majority of men in Uganda are not circumcised; only 24% of men are circumcised despite that fact that there are cultural groups that practice traditional circumcision (UDHS, 2011).

5.2 Socio demographic factors associated with the uptake of safe male circumcision

In this study, age, religion, marital status, type of housing, main source of income and monthly income were among the socio demographic factors significantly associated with uptake of SMC among the youth. The influence of religion could be attributed to the fact that SMC is a practice adopted by the Kenyan ministry of Health and it's emphasized by religious leaders and health workers. This is in line with Hindu et al., (2008) who found out in a study

done in Nsambya Uganda that religion was a significant factor in circumcision prevalence; in this case Muslims tend to circumcise more of their male. Weiss (2007) also found out in a study of global determinants of prevalence that religion is a big determinant of circumcision.

Demographics such age, marital status and income could influence SMC due to the fact that when one is obliged to family process such as marriage, the man becomes the bread winner in the family. As such, he could fear the risk of getting circumcised because it is associated with altered family and occupational processes such leaving work or marital roles as the wound heals. These findings are in line with various researchers such as Rob, (2007) who reported that male circumcision is taken as a norm in some communities. However, some men do not embrace this practice due to personal reasons to turn down male circumcision, even if their culture allows it such as leaving work for some time or failure to fulfill family obligations (Rob et al., 2007). Herman et al (2011) also reported that too much time away from work, especially if the man is the sole provider for the family, is the most significant barrier to seeking the service. This barrier was especially noted among older men, and men working in the informal sector, including bicycle transporters, security guards, fishermen and others. Participants believed that men might be away from work for a minimum of one week up to a maximum of 12 weeks after circumcision (Herman et al., 2011).

Researchers such as Obure et al (2009) reported that apart from the actual cost of the procedure, there are a myriad of additional associated costs that could obstruct circumcision-seeking behavior in the community. These included expenses for wound dressing, medications, and transport costs to visit the health facility. Moreover, circumcision was least among household priorities and its effects long-term. In addition, there was fear that circumcision may temporarily immobilize economically productive males. Many discussants perceived that this time taken to heal would lead to loss of much needed daily household income. Scolnic et al (2014) found out that same about costs particularly indirect costs for transport was another barrier to SMC. Notably, participants felt burdened by the cumulative transport costs associated with SMC because they were required to make multiple visits to the clinic to register for the service, get circumcised, and return for several follow-up visits.

There was no relationship between ward, level of education, employment status and uptake of safe male circumcision.

5.3 Individual factors associated with the uptake of safe male circumcision

This study revealed that most respondents had ever had of SMC while a quarter of the respondents reported that they had never had of SMC. Awareness of SMC in this setting could be attributed to the fact that male circumcision is a universal practice in this area, in addition, its recommendation by both the county and central governments. Awareness of SMC is a significant predictor of uptake of SMC in this study. This therefore implies that being aware of SMC could increase the likelihood of utilizing SMC.

Sources of information on SMC included friends, Schools, church, media and NGOs. Most youth share most of the information with friends in the communities where they live and at school where they spend most of their time. Therefore, information on SMC is commonly shared by the youth in their peer discussion. Church leaders have a fundamental role in instilling cultural and government policies to their followers therefore they contribute a substantial proportion of the information given to the community where the youth are part. In this study source of information on SMC is a significant predictor of uptake of SMC, implying that information given on the benefits and negative perceptions of the information source could hinder one's uptake of SMC.

Muhangi (2010) in their study carried out in Kayunga and Palisa in Uganda found out that exposure to information about the benefits of male circumcision was reported to have led some young men to be circumcised. In fact, exposure to information from trusted sources such as radio health programs was found to have been a tipping point in young men's decisions to get circumcised. On the contrary he also discovered that for some people, lack of awareness about the benefits of male circumcision was a key constraint to the adoption of SMC. Indeed, it is difficult for people to adopt male circumcision if they do not know much about it.

Most respondents were aware of benefits of SMC. More than a half of the respondents reported that there are health facilities which offer SMC services on a free of charge basis. Only 32% reported that they were not aware of health facilities offering SMC services and 43% reported that SMC services were offered at a charge. Awareness of the benefits of SMC could be due to health information on the benefits of SMC that passed on mass media and NGOs that strive to reduce the burden of HIV. Health education on the role of SMC in reduction of HIV in Sub Saharan Africa has also been adopted by various ministries of health

in this region and its partners in attempt to reduce the incidence of HIV. This could be one of the reasons for availability of health facilities and health workers who are carrying out SMC. In addition, knowledge on the benefits of SMC was significantly associated with uptake of SMC. This implies that the level of knowledge on the benefits of SMC could motivate or limit an individual to utilize SMC services. Similar studies have reported that exposure to information about the benefits of male circumcision was reported to have led some young men to be circumcised (Muhangi et al., 2010). In fact, exposure to information from trusted sources such as radio health programs was found to have been a tipping point in young men's decisions to get circumcised. On the contrary, lack of awareness about the benefits of male circumcision was a key constraint to the adoption of SMC. Indeed, it is difficult for people to adopt male circumcision if they do not know much about it (Muhangi et al., 2010).

Spouses were the main influence for one to seek SMC followed by parents, friend and siblings who had undergone SMC. This could be attributed to the fact that in most cases before an individual takes up actions that affect health and body image such as SMC, consultations are made with spouses, friends or parents.

5.4 Social cultural factors influencing the uptake of male circumcision

Most respondents reported that fear of stigma associated with circumcision was the main barrier to uptake of SMC, followed by fear of pain, religious taboos on SMC, spousal refusal, fear of loss of sexual function and other causes. Studies have shown similar barriers to uptake of SMC; for instance, a study in Iringa Tanzania showed that fear of impotence or reduced sexual performance as a result of circumcision and rumors that a circumcised man could not satisfy his wife (USAID, 2013).

Spousal refusal could be attributed to fear that circumcision could reduce a man's ability to satisfy his wife, so one thinks like he cannot afford to lose his wife because of adult circumcision. Further educational efforts together with personal testimonials from men who had been circumcised would serve to easily dispel these fears of reduced sexual performance.

Fear of pain is associated with uptake of SMC mainly due to perceptions that the procedure of carried in a painful way. Similar studies have shown that fear of pain during and after the procedure. Men express concern about pain during surgery, but also fear pain during recovery (Liham et al., 2014). Experiences of circumcised men should be shared with other uncircumcised men to alleviate concerns of pain as they had expected. Laura et al (2014)

reported that some men feared intense pain because they saw circumcision as an invasive procedure. Men's fear of pain was not limited to cutting off the foreskin pain but associated with the entire process of circumcision: waiting for the procedure and observing men who have just been circumcised, pain from local anesthetic injections, pain from having stitches removed, and pain through the healing period, particularly when one has unintended erections (Laura et al., 2014). Fear of erections as a cause of pain in the weeks following circumcision and some participants even requested a medication to prevent erections. Nearly 60% of the survey participants reasoned that it is the fear of pain that has prevented other men from seeking SMC.

Other studies have reported that time constraints are associated with uptake of SMC for instance; time off from school or work is needed to recover from the pain of circumcision, and a perceived 20% lack time off from school and 17% lacked time off work, has caused men to delay seeking SMC.(Brian J Moris...2012)

According to Herma-rollof et al (2011) abstinence period of some duration was recommended after SMC, and a discussion was always held between men and their female sex partners. Findings showed that men, especially young men, would be concerned that their female sex partners might seek other lovers while they are recovering. Older men reported that sleeping in the same bed with a wife would make it difficult to observe the abstinence period. Various duration of the abstinence period, known the recommended duration of the abstinence period reported that six weeks was too long to abstain from sexual intercourse (Herma-rollof et al., 2011).

Circumcision is an important transition of the kisii people in the study area because it ushers them to adulthood. On the contrary the Luo community who dominate the area traditionally do not circumscie.This has been one of the greatest barrier to circumcision whereby some youth reported that they were afraid of losing a part of their body.Some even said that their ancestors were not happy with circumcision . A study conducted in Uganda in 2012 by USAID concurs. Findings from the study showed that, apart from its positive influence on young men's decision to seek male circumcision, culture can also negatively affect such decisions in certain ways especially as regards medical male circumcision. The role of culture in negatively influencing decisions to seek MC and MMC arises from the fact that circumcision is not traditionally practiced in majority cultures in Uganda.In this study, some

young men and their parents from non-traditionally circumcising ethnic communities expressed strong feelings against male circumcision because this practice is not part of their cultures. In such cases, male circumcision was perceived as alien, and as a reserve of particular religions and ethnic groups and cultures. They argued that they could not adopt a practice that their forefathers never had.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

6.1 Conclusions

The aim of this study was to determine the factors associated with uptake of safe male circumcision among youth in Siaya County. Findings from this study have shown that the prevalence of uptake of safe male circumcision among the youth living in the lake side villages of Siaya County was 67%. This percentage has not changed from the earlier reported prevalence of uptake of safe male circumcision in Nyanza (66%) by 2012, depicting stagnation in usage of the procedure.

Various factors were significantly associated with uptake of SMC; these include social demographic factors such as age, religion, marital status, type of housing, main source of income and monthly income. Individual related factors that such awareness of SMC, source of information on SMC, knowledge on the benefits, and who influenced one to go for SMC, were significant predictors of SMC. Barriers associated with uptake of SMC and perceptions on the importance of SMC were the socio cultural factors significantly associated with uptake of SMC among the respondents.

6.2 Recommendations

Findings from this study highlight the need for re-evaluation of the current strategies used to promote voluntary medical male circumcision in Siaya County so as to encourage more youth to take up SMC. More knowledge about SMC health benefits positively affects people's attitude towards its uptake, therefore health promotion programs should be scaled up to improve the knowledge on the benefits of SMC. County and national task forces should be setup to conduct robust sensitization campaigns that are focused on educating health workers, political and traditional leaders, youths and the media about safe male circumcision, its benefits and its relation to HIV prevention. This may promote the uptake of SMC services among the youth and older men.

Additionally, circumcision services need to be more robust and tailored to fit the preferences of even the remaining population that is not circumcised. Some distances traveled to hospitals are great and some NGOs' programs only target youth in institutions thus making it hard for

the hard to reach populations not undergoing the procedure. One such solution would be door to door circumcision and follow up.

A multi sector approach should be put in place in that when a person undergoes the procedure, then a leave should be issued and due compensation given to encourage the procedure.

6.3 Future studies

In future, this study should be scaled up to include other populations more especially those who are purely the non-traditionally circumcising populations. There is also need to conduct studies on behavioral change on those who are circumcised so as to determine the after effects of SMC on some one's behavior. Last but not least, further studies looking at how circumcision prevents the spread of HIV should be done.

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APPENDIX I: CONSENT FORM

STUDY TITLE: FACTORS INFLUENCING THE UPTAKE OF SAFE MALE CIRCUMCISSION AMONG YOUTH LIVING IN THE LAKE SIDE VILLAGES OF SIAYA COUNTY, KENYA

INTRODUCTION

You are being asked to volunteer for a research study. This study is to be conducted in the lake side villages of Siaya County. The Investigator in charge of this study is AMOS DESMOND NG'UONO.

PURPOSE OF THE STUDY

This research study is being done to satisfy the requirements for the award of degree of bachelors of nursing sciences (BNS) of International Health Sciences University (IHSU). In this study the data generated from this study will provide information that may be useful in devising strategies to improve the uptake of safe male circumcision services in Siaya County.

HOW THE STUDY IS DONE.

Written informed consent will be obtained before enrolment into the study. Using a standardized questionnaire the data on uptake of safe male circumcision will be obtained.

PROCEDURES

Demographic data and other information related to the uptake of safe male circumcision shall be obtained from the study participants who consent.

RISKS AND DISCOMFORTS

Confidentiality: Participation in research may involve a loss of privacy, but information about you will be handled as confidentially as possible. Information related to uptake of safe male circumcision will be collected from you and only the study personnel will have access to this information. Records will be kept as confidential as possible. The study participants will not be identified by name. You will also have the right to request and see the information collected during this study.

BENEFITS

Your participation in the study will allow for collection of information that may be useful in the following ways;

(a) Improving the knowledge of health workers on uptake of circumcision based on the findings. This will help identify their strength and weaknesses on routine safe male circumcision.

b) In the District, this data may be used to address issues related to circumcision, enhance education programs to improve the lives and care as well as preventive strategies for STDs and HIV.

(c) The findings of this study may be used as a basis to enable the Ministry of Health develop evaluation and follow up tools for the health workers on safe male circumcision.

COST/PAYMENT

Your participation is entirely voluntary. You will thus not be paid for participation in the study.

ALTERNATIVES TO PARTICIPATION

If you decide that you do not want to participate in the study or decide to withdraw from the study at any time and for any reason there will be no coercion or intimidation. You will be at liberty to leave the study.

CONSEQUENCES OF WITHDRAWAL

Should you decide to withdraw from the study at the beginning, then no further action can be taken.

USE OF THE RESULTS

The findings from this study may be published as a book. After the study is completed, you may request an explanation of the study results.

VOLUNTARY PARTICIPATION

Participation in this study is entirely voluntary. You have the right to refuse participation or to withdraw at any point in this study without negative consequences or loss of benefits to which you are otherwise entitled.

IMPLICATION OF YOUR SIGNATURE OR THUMBPRINT

If you give consent to participate in this study, you should sign or place your thumbprint in the consent form. Your signature or thumbprint below means that you understand the information given about your participation in the study and in the consent form.

PARTICIPATION CONSENT PAGE

Title of the study.....

Name of Investigator.....

Address/Phone number.....

I -----

understand that I am agreeing to participate in a research project that the purpose of the study is to determine factors influencing the uptake of safe male circumcision. I will be asked a series of interview questions and I will record answers. My name will not be used and the confidentiality of my responses will be protected. The entire procedure will take 10-15 minutes. My participation will take place in a private area with only the researcher present. I can decline to answer any question.

Risks

The interview is entirely voluntary and does not entail any foreseeable risks. I understand that I may quit at any time. All data will be maintained in a locked file by investigator for one year and then shredded. Benefits of participation may include a contribution to scholarly research that identifies issues of safe male circumcision. There will be no direct benefits to me.

Participation

I understand that my participation in this study is voluntary and that I may withdraw from the study at any time. My refusal to participate will involve no penalty or loss of benefits to which I am otherwise entitled. I understand that I will not be compensated for my participation. An offer has been to answer all of my questions and concerns about the study. I will be given a copy of the dated and signed consent form to keep.

Participant’s name & signature of participant or Thumbprint / legal representative

Date/Time.....

APPENDIX II: QUESTIONNAIRE

STUDY TITLE: FACTORS INFLUENCING THE UPTAKE OF SAFE MALE CIRCUMCISION AMONG YOUTH LIVING IN LAKE SIDE VILLAGES OF SIAYA COUNTY, KENYA

Instructions

Read the following questions carefully, tick the most appropriate answer or write where applicable.

SECTION A: SOCIO DEMOGRAPHIC INFORMATION

Participant ID: -----

1. How old are you?

15-20

21-25

26-30

31-35

2. Which ward do you come from?

East Yimbo

Central Sakwa

West Yimbo

Central Sakwa

North Sakwa

East Uyoma

West Uyoma

3. What is your religion?

Christian

Tradition African religion

Muslim

4. What is your marital status?

Single.

Married

Divorced

Widowed

5. What is your highest level of education attained?

No formal education

Primary

Secondary

Tertiary

6. Are you employed?

Yes No

7. If employed, what is your current employment?

Peasant

Self Employed

Civil Servant

Others (Specify)

8. What type of house do you live in?

Temporary

Semi permanent

Permanent

9. What is your main source of income?

Job

Relatives

Business

10. How much money do you raise in a month? (In Kenya shillings)

Below 5000

Up to 10000

Up to 25000

Above 500000

**SECTION B: INDIVIDUAL FACTOR AND SOCIO CULTURAL INFORMATION
RELATED WITH UPTAKE OF SAFE MALE CIRCUMCISION**

11. Have you ever heard about safe male circumcision?

Yes No

12. If yes, from where have you heard it?

School

Church

From a friend

Media

NGOs

13. Do you know the benefits of circumcision?

Yes

No

14. Are there health centers or hospitals in Siaya county where you can get safe male circumcision services?

Yes

No

15. If yes, list down some of them.

.....
.....
.....

16. Are you circumcised?

Yes

No

17. Who influenced you to get circumcised?

Parent

Spouse

Friend

Siblings

Religious leader

18. If you were circumcised, when were you circumcised?

month ----- year-----

19. Which hospital/organizations were you circumcised?

.....

20. Was circumcision free?

Yes

No

21. If you are not circumcised, what is hindering you from circumcision?

Lack of knowledge about practice

Fear of pain

Fear of stigma

Spousal refusal

Time spent away from work
Fear for sexual performance
Cultural/ religious taboos
Other (please specify)

.....
.....
.....

22. Do you think safe male circumcision is a good practice?

Yes
No

23. IF yes why do you think it's a good practice

.....
.....
.....

24. What do you think should be done to improve uptake of safe male circumcision services in Siaya county?

.....
.....
.....
.....
.....

Thank you for your response. your time, effort and cooperation are highly appreciated.

APPENDIX III: INTRODUCTORY LETTER AND CORRESPONDENCE

